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Agricultural.

HINTS FOR THE SEASON.

We sometimes preface our suggestions under this head with remarks more general than would be in place at this hot and driving season. Last month we spoke somewhat at large of the farming interest, as the great and leading interest, and of the farmers themselves as the pillars of that and of all other interests, and hence of the vast importance of self-culture and of the right training for their families. At present, so engrossing are their employments, that we suppose they will hardly bear to hear of anything but the *work to be done.*

The Potato Field.

The presumption is, that you have been over your potato field often enough and thoroughly enough to secure exemption from weeds to the injury of the crop; that you have hauled earth around the hills *only once*, hilling them slightly;—not slightly in the sense of carelessly, only half doing the work, but of raising low and broad accumulations about the hills, instead of those cone-formed, steeple-like elevations that we used to see;—and that now you can leave them for other more pressing work, secure, that if you do not have a good yield, it will not be from any neglect of yours. If you have not done all this, now is your time, for potatoes should not be much disturbed after the young tubers have begun to set.

Indian Corn.

The corn fields, should if possible be in such order by the time the roots have spread through the whole soil by the 10th to the 20th of July, that nothing need be feared from weeds for the rest of the season. We know that an ill-kept field will send up an immense growth of weeds in a wonderfully short time; but it is not so with a field that was plowed early, so that most of the seeds sprouted and were killed before the corn was put in, and that has been kept clean from that time to this.

The weed seeds in a soil so managed have nearly all sprung up before this time; their vital energy has been exhausted; the plants that sprung from them have been destroyed; and if the ground has been often stirred hitherto, you have now but to put the last touch with the cultivator and hoe, leaving the surface loose, fresh and perfectly clean. Put this finish to the field as early in July as possible, leaving the surface nearly level, raised, if you please, a very

little around the hills, and that only because the work is more expeditiously done in this way, and for the rest of the season you may trust Providence.

Only one year in thirty, since our country was settled, has the farmer, who did his whole duty to the corn field till the 10th or 15th, or at farthest the 20th of July, and then kept it fenced afterwards, (for Providence has not promised to keep out the cattle,) been disappointed of a crop, and then even not wholly disappointed, for we doubt whether there has been one year in fifty, when as much as half a crop has not partially rewarded his labors. We say then finish off with corn field as soon as may be, and have time for other pressing work. If you leave the soil loose and clean about this time, having before cultivated faithfully, *it will not compact badly, nor become very weedy* after this time.

As haying and harvesting are rather imperious, as to the time they shall be done, leaving the farmer but a few days at most, to choose between for putting in the scythe and the sickle, or the mower and the reaper, and as the corn becomes entirely too large to be worked among, before harvest is over, it has always seemed to us that the corn fields should first be through with, if possible.

Root Crops.

Some farmers are going largely into the culture of the root crops. More seem to despise them. We can hardly believe that either are right. That root growing will never be as prominent with us as with the English, is certain. Their climate demands it. Ours forbids it, except to a limited extent, and that not so much for the sake of raising food for animals, as for the purpose of varying the quality and extending the variety of animal food, that the feeder may have a wider range, from which to select and mix food for animals, according to their condition and the object he has in feeding.

With this consideration in view, we suppose it may be advisible for most farmers, perhaps all, to cultivate a rather limited breadth to root crops, turnips, ruta bagas, carrots, or sugar beets, as one or the others are found best adapted to the soil. But as many are not yet convinced of this, and not a few are dead-set against it, we advise such to look at the subject inquiringly and not unalterably fixed. Few of us are so wise but that we may yet change our opinions on some points. But if you will not go into the business in earnest, adopting the drill culture and employing the most approved manures, it may be well at least to grow a patch of turnips in the old way of sowing broadcast.

The best way of doing this, is, to fence and plow up a piece of pasture land about the first of July; yard a herd of cattle on it a few nights, and then, not on

The 25th of July,
Wet or dry,

but at some convenient time between the 10th and 30th, when neither too wet nor too dry, harrow smartly, clean off all loose stones and rubbish, sow as evenly as possible, not too thickly, for it is a slow job to thin out when they are sowed broadcast, and cover lightly with a bush-harrow. A patch grownin this way is worth the cost for the table, besides affording some for the stock.

A Word about the Garden.

Do not let the pressure of farm work cause you to neglect the garden. The soil here is supposed to be highly manured. Weeds grow more luxuriantly here than in the fields. It will not do to neglect them many days. We know that a patch occupied as a garden, not more, it may be, than a quarter of an acre, looks smaller to a farmer, than to any one else. He is apt to begrudge the time spent upon it. But consider the luxuries it affords, and not only the luxuries but the real substantials of living, and you will find that no labor pays better than that bestowed on the garden.

A little time each day will prevent your small fruits, currants, gooseberries, &c., and your vegetables and flowers from being choked with weeds, and will in part forestall the evil of an increased crop of weeds another year.

If you say the women and girls must take care of the flowers in July we have no objection, if they have none, and really we do not think they ought to have. It is our mission to tell American women once a month, at least, that they ought to be in the open air a great deal more than is usual among us, and that if they cultivate a good, large flower plot with their own hands it will do them no sort of harm.

Haying.

Do not fail to have three or four dozen hay caps, and more if your farm is large, in readiness. All you want is two yards square (or four square yards) of ordinary unbleached cotton cloth sheeting. Do not paint or oil it. No water comes through our umbrellas, though made generally of a very thin, slazy cotton. Two yards long by one and a half wide would do pretty well, but two yards each way is better. Take your own mode of fastening them down; one person would prefer one mode and another a different. A loop on each corner, with a pin 10 or 12 inches long and ⅝ of an inch in diameter, the pin to enter the ground sloping from the hay, will answer every purpose. They need not cost over 30 cts. each, and they will last, if well taken care of, 8 or 10 years, and save their cost in the increased value of the hay each year.

There are portions of New-England, where the test of good farming seems to be, to be through with the hay harvest early in July. We are confident that something is lost in those regions, by cutting grass too green. We do not clamor for the earliest cutting for two reasons;—one, that it is almost impossible for the farmer, with such an amount of help as he can command, to do his haying in June without neglecting his field crops till too late; the other that we do not believe the hay as valuable, if cut while only beginning to blossom. The blossom should have fallen, in part at least, and the seed, if not out of the milk state, should be going out, before the scythe or mowing-machine is put into the meadow.

It is undoubtedly a more common error to let grass stand too long. We would neither cut it before the seed is formed, nor let it stand till the seed is ripe and will shell out. Midway between these points is best, if you could choose the exact moment. But you can not. The hoeing of field crops will sometimes delay the commencement of haying, and the harvesting of cereals will interrupt it, in spite of the best calculations.

If you could cut hay at the very moment you would, uninterrupted by other work, it would be a good rule to cut herds grass about when the last blossoms are falling, herds grass and clover by the same rule, clover alone a little earlier, if lodged badly, but a little later if standing upright, and red-top a little later than either. The mixed grass of old sward land we would cut some days sooner, if we were designing it for milk cows, than for stock cattle, working oxen or horses; and sometimes you will doubtless cut grass earlier, if you expect to cut a second crop, than if you do not. Many circumstances, which none but you know, will have their influence.

The farmer, who has all things in readiness to begin upon the hay crop the first of July, who then waits a little for the hoe crops if necessary, working more in the field in lowery weather, and more in the meadow when the sun shines, and who intermits the haying as little as may be in order to harvest his cereals at just the best time, and gets through with haying within the month of July, does as well as he can.

There is hardly an excuse for being at

the haying after August comes in, and in our opinion there is very little reason for neglecting other work in order to be at it before June goes out. If hay is made in July, the best portions first, and the inferior later, there is no cause for mourning because this or that meadow was not cut a day or two sooner, or a trifle later, nor because some neighbor may have finished before you.

That there is a choice in the time, and that the practised eye of the farmer can select the very day when a given meadow will give the greatest value, may be true. But the deterioration by standing a few days after the best time, is not such as should induce to a neglect of every thing else, nor to excessively severe labor, such as partially to disqualify men for the continuance of labor and for the general duties of life, after the harvest season and the heat of summer are over.

We could not but observe while in England a few years since, that haying there is a very different business from what it is here; that 12 to 15 days is about their time to make hay; and yet that after all that time of slopping and shining, the hay seems to be tolerably good, giving a fragrant, pleasant odor, such as ours fails to have after being several times wet and dried. This led us to inquire, do we not sun our hay too much? Is it not better to make it in the swath and the cock more than is common among us? We rather think it is; that the exposing it, evenly spread, too long to the intense rays of our burning suns is injurious. If left in the swath till noon; then turned over, not spread; and cocked up at middle of afternoon, will it not be more fragrant, and less tough and fibrous? The farmer should observe closely and judge for himself.

Oats.

If oats are cut while the straw is a little green, just as the kernel has passed from the milk to the dough state, the straw is worth far more than if they stand till dead ripe, and we believe the grain is at least as valuable, and we rather think more so, as it will shell less in carting. The oat crop should, if possible, be so secured that the straw will come out bright and clean after threshing. If cut with a hay cutting-machine and moistened with water, and fed with a little Indian meal or a few roots, it is almost as valuable as a medium quality of hay. With many we think it has been an error, that they have made too little of straw as a means of wintering stock cattle.

We have so often observed the superior growth of grass after barley, as compared with that on ground laid down with oats, that we think we can not be mistaken in the belief that the former is more favorable for the succeeding grass crop; and we here throw out the suggestion, that in some cases it may be wise to seed land with barley instead of oats, for the sake of the grass crops to follow, even though the oat crop should promise more immediate profit.

Rye.

This with our fathers was an important crop. Their rye and Indian corn bread was a good thing in its time. It made hale, stout men; and we are not sorry that it has not yet entirely disappeared; but with the exception of cold regions, rye will hardly retain the importance it once had. The time for cutting rye is early in the dough state, while the straw yet requires a good sunny day in the gavel, and a few days sun and wind in the stook, to prepare it for the barn. Thus cut and cured, the grain makes the next best bread after wheat, and, for a change, just about as good as can be made, if risen light and eaten within a day or two after being baked.

Wheat.

A large farmer once told us that he lost two thousand dollars on one crop of wheat by following the advice of his agricultural editor, to cut wheat early

in the milk state. Well, that editor ought to have been whipped, moderately we suppose, for he probably did not mean so badly as he did, for giving such advice, and it was good enough for that farmer to loose something (we are sorry he lost so much) for not knowing better than to follow it.

The time for cutting wheat is of so much importance, that we almost fear to speak upon it; and yet we have a strong impression that it should be cut late in the dough state, some days after the milky appearance has disappeared, but a day or two before it can be said to be quite ripe. We believe that if cut then, it ripens at least as great a weight of flour, and of a better quality, and of course it shells less. The small wheat grower can cut it, at what he thinks the best time, and by favor of the reapers and harvesters, the same is now almost equally true of the grower of hundreds or thousands of acres. What a change these machines have brought over the scene. The increased value of the crop in consequence of being cut, in the wheat growing regions, nearer the very best time, must go far towards defraying the expense of the machines; and then it is agreed, we believe, that less is wasted on the field—another important item in their favor.

The Home Fertilizers.

These must be the farmer's main dependence. If a thousand guano islands should be discovered, he must still rely mainly on such fertilizers as are on or near his own land. It is enough that the American farmer has a long sea freight to pay on his surplus produce, without paying freight half round the globe on the manures he grows it with. If you buy the best guano, it costs too much. If you buy any other, you get cheated, and might about as well buy your farm by the pound instead of buying by the acre. An acre, one foot deep, weighs about 2,000 tons. A hundred feet deep would weigh 200,000 tons or more, and it is all about as good as some guanos, which parties not a thousand miles from us would like to sell you.

As soon as the pressure of haying and harvesting are a little over, be getting out the stuff to compost with next winter and spring. But it is yet a little too soon to urge that subject; next month will be in time. We will then give you an article, worth as much to you as a ton of the guano, and it will cost you a great deal less.

For the present, we will only say, let the dairy farmer, whose cows are much in the yard, keep drawing in swamp muck, leaf mold, head lands, anything he can get near by, to absorb the better portions of the manure and become so incorporated with them as to form one of the very best top-dressings for his meadow next spring.

There are other things on which we would write just at this time; but it is too busy a season for the farmer to read long articles; and we must ask our friends to look for them in our shorter items otherwhere.—Ed.

A JERSEY HEIFER.

John W. Proctor, of South Danvers, Mass., whose "*notions*" about cattle we have before alluded to, says;—

Ed. Farmers' Magazine:—You are entirely right in your views of my notions of cattle best fitted to New-England farms. Although I admire the beautiful Jerseys that I meet on the farms of Mr. Fay and Mr. Waters, in this vicinity, who are abundantly able to own and cherish them, still I am satisfied that they would not be a profitable stock for the farmer to live by, if he has to pay $100, or more, for each animal. I lately saw at Mr. Fay's a Jersey heifer, perfectly beautiful, and partook of the butter that she yielded. It was first-rate. This animal, he informed me, was so free with her milk, that they took from her more than six quarts a day, for several weeks previous to her calving; and

that she continues to give more than twelve quarts a day at the present time, on grass feed only. Observe that she is a heifer, not yet three years old. Any gentleman who has such a cow, will have need of few other luxuries for his table.

Very truly yours,

J. W. P.

This kind of cow (there is not a person living whose interest we would willingly thwart by saying it) is good for the one-cow purpose, that of giving milk, for a family keeping but one cow, nearly the whole year, but in our opinion is good for nothing else; and we do most sincerely hope the blood will never become mingled with the general stock of the country.

The old Alderneys, from which we believe these are an improvement the wrong way,—a sad deterioration for any other than the one-cow-for-a-family use,—were a very decent stock; more, they were a very good stock, large, thick meated, well formed; as unlike the puny, gazelle-eyed, frail things, which we sometimes see at our shows, as well can be. We have seen them in their native country, and wondered how they could have been so improved downwards, as in the British isles on the French coast.

Henry the Eighth, like a good many others who have ruled England by divine right, was a great scamp. He once stole a large number of the old Normandy cattle, 40,000 we believe, brought them to England, and diffused them over the kingdom to improve the stock of the island. Now, although he was a great rascal, he could not have been great fool enough to do thus, if they had been no better than the present Alderneys or the improved Jerseys, either of which have improved the wrong way, as compared with the old stock in that part of France. —Ed.

NATIVE CATTLE—WHAT?

Mr. Editor:—Three years since, I was asked, by an eminent farmer, what I understood by *native cattle*. I told him those which were bred and reared on our own farms, and whose lineage could not be traced to any other source. In your remarks upon the "old red stock of New-England," I understand you to entertain the same idea. We speak of the offspring of this class, of animals as *native*, in distinction, from the Durhams, the Devons, the Jerseys, the Herefords, the Ayershires, &c., &c., which have been imported within the last fifty years. It is true, they all sprung from ancestors that were imported. But we have as definite an idea, of what is meant by the term *native* as applied to cattle, as has the admirer of Durhams, or Devons, or Jerseys,—and just the same right to the use of the term, in one case, as the other. To say, as do some, there are no *native cattle* among us, is an absurd affectation of knowledge, indicating more oddity than wisdom. (A great deal more.—Ed.)

I will not say that in all cases the natives are superior to the imported; but I will say, in many cases, and for many purposes, even now, they are not inferior. And let the same care be employed in their selection and their breeding, they will not in any respect be inferior. You are entirely right in supposing, that as fine an animal for dairy purposes can be obtained from among them for $200, as now cost $2,000, when imported, with special recommendations. Will it be said, that we can have no confidence in their progeny;—and no assurance that a good stock can be reared from them? Does not the same law of nature, "like produces like," apply to them as to others? Away then with the pretense that *natives* are not worthy of regard. Fair play is the jewel. We ask nothing more. Shade of Pickering.

As good a cow for dairy purposes as the world affords, can be bought for a great deal less than $200, probably less than $100, if we confine the expression dairy purposes, to the production of milk, butter, cheese, and beef when the

animal is no longer kept for the dairy. But if we take into account the rearing of valuable stock from these cows the case might be different. You can buy an American cow, with no pedigree, for $100, that shall give as much milk and of as good quality the next seven years, as the best English cow you can import for the most fabulous price. So much is certain. The world can not beat us in good milkers. But with regard to the imported cow, with a long pedigree and a tall price, is there not a fixed type, which is the result of judicious breeding for generations, and on account of this fixed type, is there not a stronger probability, that in her case like will be followed by like, and so the offspring, of the high-bred cow be of more value than of the other.

This is the very point on which we are not now going to speak, otherwise than by interrogatories. There are those who believe we may pay enormous prices for cows for the sake of greater certainty of like offspring. English breeders have sold from ten to twelve thousand dollars worth of calves from one cow. Shall American breeders presume upon similar success? Will they make money by attempting it? and will those who buy of them make money? We have heard of a man, whose seven sons would swap horses with each other through a whole rainy day in harvest time, and each make his hundred dollars. But it sometimes happens that if one party to a trade makes, the other loses; and we are not quite sure it will not be so with the buyers of stock reared from very expensive importations. Let us have light on this subject from the breeders of foreign stock. We have always thought they were doing a good thing for the country, by introducing the best cattle that could be obtained abroad. The thing has hitherto been conducted mostly by men of wealth, who perhaps would have no objection to making money by the operation, but whom nevertheless it would not harm, if they should loose a few thousands by it, and, so far, so well.

As most of the best English breeds now exist among us, and as we have the stocks wherefrom to breed Durhams, Herefords, Devons, Ayreshires, natives, and crosses of all sorts and sizes, it becomes a question how much longer it will be well, in a national point of view that the process of importation should go on. That England will profit by the competition between the Pope, the Emperor, and the American farmer, we have little doubt. But we shall not be specially anxious to benefit England, till she consents to let our ships go on their way undisturbed. Our own view is that the importers have done well, and we hope they will reap a fair reward. But we question whether they have not done well just about long enough in that line, either for their own interest or that of the country. If they will now aim at the best pure breeds and the best crosses for each locality, from such stocks as they have already imported, and if others will breed with equal intelligence and good sense from our own American cattle, there is little doubt that we shall beat the world in neat cattle, before many years, as from our advantages we ought.—Ed.

SCIENCE AND PRACTICE.

When the deductions of science and the testimony of practical men disagree, the latter to be preferred—Confirmatory of each other when they agree—Soil Culture—Ammonia.

The man of science may tell us what, according to certain laws of nature, we may reasonably expect to result from processes which he recommends. But if the farmer tries his processes, and then testifies that the predicted results do not follow, he is to be believed rather than his scientific adviser. If many farmers try them, and give a uniform, harmonious testimony to the failure of a promised result, it may be set down that they are right and he is wrong.

Nevertheless he may not be wholly wrong. Nine-tenths of all that he has recommended may be in the right direction, and the failure may come from a single item of wrong advice, or from his failing to give one more item of good advice. The farmer, it is true, can not afford to experiment too much. The very idea of an experiment implies uncertainty, whereas the nearest possible approach to certainty is what he desires. He is not willing to incur too great a risk of losing medium crops, in the attempt to secure maximum.

All experiments, about which there is much uncertainty, should be at first on a small scale; and then the scale be increased, as the uncertainty diminishes, or the experiments be desisted from, if the indications are entirely unfavorable. We have seen it recommended to grow potatoes, by scattering the seed on turf land, covering the whole surface with straw or other litter, four inches deep, letting them alone till towards winter, and then taking out a tremendous crop, of the very finest tubers, not a particle of soil adhering, clean enough to go into the pot, or the oven; and we have tried a patch this way with a very favorable result.

But to go and experiment on a ten acre lot, in the same way, would be taking too much risk, and is wholly unnecessary, since, in this particular case, a square rod is as good for testing the question, as a square mile. If a dozen credible farmers should tell us that they had tried this experiment on a single rod, and should report as favorable a result as happened to us, we would then venture on a larger scale; but till we had something like that amount of testimony, we would either pursue the old way, or experiment on a more cautious scale. It is desirable that farmers should experiment, and that they should report results; but they need not experiment in such a way as to lose much, in case of failure; and they may rest assured that their reports will constitute the rule for future procedure, all mere scientific deductions yielding to their testimony.

But when the deductions of science and the testimony of farmers are in perfect agreement, they confirm each other. We wish to illustrate this point, and, in doing so, not to depart from our purpose of making our pages eminently practical. Everybody knows that plants receive their nitrogen mostly in the form of ammonia, and their carbon almost entirely in that of carbonic acid. And everybody knows, we suppose, that all the ammonia that is imported in the form of Peruvian guano costs the farmer not less than 16 cents a pound. The chemist naturally asks, do not the forces of nature produce ammonia, and can not the farmer avail himself of the ammonia which is produced on his own farm, or would be, if he managed rightly, at a cheaper rate than of that which comes around Cape Horn, after having supported one lazy government, and not usually reaching him, till a good many sharpers this side of Peru have had a finger in the pie?

The chemist asks, what is ammonnia? His crucibles and retorts reply, that it is a combination of nitrogen and hydrogen, 14 lbs. of the former to 3 of the latter; two substances as cheap and as plenty everywhere among as rain water in Noah's time. Why then need it be expensive? Because, says the chemist, no way is yet known of compelling the two to unite at a cheap rate. That is true, so far as the chemist is concerned. He can not compel nitrogen and hydrogen to combine into ammonia. But can not the farmer? Farmers can do some things that chemists can not; and we are not sure this manufacturing ammonia from nitrogen and hydrogen for the feeding of plants is not one of them.

Let us look at this;—you mellow the surface soil of a field. There was organic matter in that soil. You add more. This organic matter—various

vegetable and animal substances—which were before in the soil, and those which you add, are no food for plants, till they have passed through several stages of decay and become soluble. Plants take up no solid matter. Everything that feeds a plant must be dissolved either in air or water, before it can perform that office. Organic matter, in a well pulverized soil, takes oxygen from the air circulating in such a soil—becomes oxidized, in successive degrees, in the last of which it is soluble in water, and becomes food for growing plants.

It is a well known law of nature that primary substances, when let loose from their combinations (in their nascent state, as is said) have a strong tendency to combine, and form new compounds. Nitrogen and hydrogen in their ordinary state show no inclination for each other, but if brought together when first separated from some other combination, they instantly unite to form ammonia. Now then, while the oxydation of organic matter is going on in a soil, whence is the oxygen obtained? We say from the air and the water that are circulating in that soil. But when oxygen is taken from air, nitrogen is left; and when it is taken from water hydrogen is left, and in accordance with a very general law of nature already spoken of, these last hasten to make up their loss of a former partner, by entering into a union with each other, in the form of ammonia; and thus there is strong reason for believing, though it may not admit of absolute proof, that the decomposition of organic matter in the soil, not only furnishes carbonic acid to the plant, but indirectly keeps up a constant manufacture of ammonia from its elements—enough, together with what is always formed in the air and in rain water, to supply the wants of the plant, and to produce maximum crops, provided the soil is sufficiently deep and is supplied with the requisite mineral matters.

Now then, looking at this subject from the scientific stand-point, we naturally form a theory;—we say, if you have a soil of ordinary capacity, neither all clay nor all sand, but such a mixture of the two as constitutes a comfortable loam; if that soil is well underdrained, or what is exactly the same thing in effect, if it lies on a porous subsoil, so as to need no underdraining; if you pulverize it to a depth of 10 to 12 inches and then run the subsoil plow a few inches deeper, that air and water may have the freest possible passage in every direction; if it is supplied with organic matter, either from the leaves, twigs and roots of the original forest, not yet exhausted, or from manures you have applied, or from the green crops you have plowed in; then we suppose the following things take place.

1st. The air circulates freely. It is the nature of air not to remain still. Indeed it is not in the power of man to confine it for any considerable time. In a well tilled soil, it traverses the whole, absorbing moisture at one point, and depositing it at another, taking heat from the warmer portions, and depositing it in the colder, and always, in summer, communicating both heat and moisture from the atmosphere to the soil, and that down as far as thorough pulverization has been practised.

2d. The water circulates freely and equably. During and after rains its motion is downward, principally by simple gravity, but partly by capillary attraction, the two co-operating to draw it downwards. After evaporation from the surface—for it must be remembered that more than half of the water that falls in rain ascends again in vapor—the motion is upwards, the water below being drawn upwards to supply that lost by evaporation from the surface. Here capillary attraction acts in opposition to gravity, and draws the water upwards in spite of the tendency of its weight to carry it downwards. If you apply moisture to the

bottom of a sponge, it will flow upwards; if to the top, downwards; if to the side, laterally. Just so water moves in any and all directions in the soil, only more slowly.

3d. That soil never can suffer to any very injurious extent from drouth. In such a thickness of pulverized earth, with a fair allowance of organic matter pervading it, there must and will, by the unalterable laws of nature, be a sufficient reserve of moisture to last from one rain to another. Through a long interval between two rains, such a soil not only reserves for the plants more of the water that fell at the previous rain, but draws more for them from the air above and from the earth beneath—is at once a better reservoir and a better attracter than a shallow soil.

4th. The organic matters in a soil so pulverized are slowly but surely, passing through those stages of decay by which they are brought to carbonic acid, water and ammonia—the three great feeders of plants—we might almost say their only food, so far as their organic elements are concerned; and the better the soil is pulverized to a sufficient depth, and the more evenly the organic matters in it are distributed, the more equably and the more economically goes on this wonderful process, first of converting the organic matter of the soil into carbonic acid, water and ammonia, and then of reconverting these into living plants, to be food for man and beast.

5th. The ammonia thus manufactured is not wholly from the organic matters, which the farmer has added, as manures. By manipulating and manuring his soil rightly, he has manufactured ammonia from its elements—has produced and used a cheap ammonia—combined the nitrogen of the air with the hydrogen of the water in his soil, into a substance for which we pay the Peruvians 16 cts. a pound, at the rate of $320 a ton; and brought it off triumphantly in the shape of golden wheat, of corn, rye, barley, fragrant hay, and those long roots, that pierce the earth and bring out its interior treasures to be ere long deposited on the surface, and reproduced in other and richer fruits.

6th. The ammonia, thus produced, being an alkali, has an effect, like the other alkalis, potash, soda and lime, to a limited extent, to dissolve the silica of the soil, and thus to bring it into a condition to be absorbed or taken up by the plant. Also the carbonic acid, into which the organic matters in the soil ultimately pass, is a solvent of various mineral substances in the soil. Rather, it is itself first absorbed by the water in the soil, and then the water, impregnated with it, dissolves many substances, which it could not dissolve otherwise. In this way the ammonia and the carbonic acid not only furnish plants with the organic matter for their growth, but are instrumental in preparing their mineral food.

7th. The farmer who heeds the teachings of science, by which we mean nothing more or less than *knowledge*, acquired by reading, thinking, working and carefully observing nature, will have his reward. This is as certain as that God made the world and that he governs it by fixed laws.

The above you may say is all theory. We do not admit that it is all theory, nor more than the smallest part of it. But suppose it were. What then? Does the testimony of practical men harmonize with it? We say it does; and we say that when science, thoughtfully and cautiously, with no upstart rattle-headedness, abounding needlessly in learned words, suggests what might naturally be expected to result from certain processes, and then when practical men every where declare that such are the results, there is evidence irrefragible, that the theory is correct, and that the practice built upon it is successful.

You know, reader, and we know, that the farmer can not get fifty loads of manure to the acre. It is therefore of no

use to be always saying to him, "Manure highly and you will get great crops." Everybody knew that before.

But we know,—and you may know, for the deductions of science and the testimony of practical farmers agree on this point, that if you will manure as highly as you can from your own resources, saving and applying all the fertilizers that come within your reach, and occasionally buying some from abroad, and at the same time if you plow and pulverize the soil to a good depth, you will raise just as large crops, as, in the long run, will be most profitable to you.

GAS HOUSE LIME.

Dr. DANA, a well known chemist, and one who has contributed largely to the application of that science to practical agriculture, says;—

"Gas lime contains sulphuretted hydrogen, sulphuric acid and ammonia. It cannot be used agriculturally till it has been exposed to the air for some months, say a year, by which it is converted into sulphate of lime and ammonia, and carbonate of lime. In this state, mixed with three times its bulk of soil, it forms a useful top-dressing—or it may be added, before mixing with soil, to the compost heap, or to meadow muck, say two bushels to the cord."

We think there can be no doubt that gas house lime contains a very considerable agricultural value, and that the unsuccessful experiments, that have been made with it, have been caused by using it in its crude state; and we would suggest its trial in the ways pointed out by Dr. Dana, as likely to be attended with paying results, wherever it can be bought for a trifle, and has not far to be transported.—ED.

FARMERS OF AMERICA, LOOK AT THIS PICTURE!

IN Great Britian about 60,000 families own all the territory, which is occupied by over 27 millions of inhabitants. Five noblemen, the Marquis of Breadalbane, the Dukes of Argyle, Athol, Sutherland, and Buccleuch, own, perhaps, one-fourth of all Scotland. The estate of the Duke of Sutherland, comprises about 700,000 acres, or more than one thousand square miles. The domains of the Marquis of Breadalbane extend one hundred English miles, and reach nearly from sea to sea.

By far the wealthiest proprietor in the lowlands of Scotland, is the Duke of Buccleuch, whose estates cover several counties, and whose palace at Dalkeith, is an establishment of real magnificence. The great object of the English law of descent is to concentrate the wealth in the hands of a few, and support an hereditary territorial aristocracy.

In North America are just about 800,000,000 of square miles. A fraction less than 300,000,000, belong to the United States. As our population is not far from 30,000,000, there would seem to be about ten square miles, or 6,400 acres for each person. This would be 32,000 acres for each family of five persons. But as most families have more than five persons, we may set down our land at 40,000 acres per household.

What will the Duke of Sutherland say to that? We have been over his estate among the wild, rocky, moss-grown, cheerless hills of Scotland; and there are not more than 20,000 acres that are worth having. With regard to the rest it would be downright oppression to make the cultivator give one penny a square mile for rent. His domains are large; and yet he has but half as much good land as fairly belongs to every American family. We do not know in the case of the other patent nobles of the highlands, but we suppose it is much so with them. Wonder if they are not ashamed of their landed possessions, when they turn their eye this way, if perchance they ever do that? Why an American farmer, with one hundred acres in fee simple, and 40,000 in reserve, need not be proud, when he compares himself with those poor holders of rack and moss, but *he should be satisfied.* If as intelligent and virtuous as those men, he is their superior; what he owns, is his; what they hold, is not theirs.—ED.

THE TIME TO CUT WHEAT.

This has been made a matter of careful experiment in England, and much more depends upon it than is generally supposed.

From a very careful series of experiments made in England, in 1840–41, by Mr. John Hanman, of Yorkshire, with a view of determining the proper period of reaping wheat, it was decided that the best time for performing the operation is, when it is in a "raw" state, or when the straw, as seen from a distance, appears green, but, closely examined, is found to be approximating to yellow, and the grain itself, being separated from the chaff, is pulpy and soft, but not in the milky stage. This gentleman has shown that, at least six dollars per acre are lost by allowing the wheat to become ripe before it is cut, and, that at the same time, its quality is not so good.

The chief advantages derived from this method, are stated to be a greater weight of grain to a given space of ground, which produces more flour, of a superior quality; the straw contains more nutritive matter, and is better relished by animals; and there is a better opportunity of securing the crop, and a saving so doing, as there is less waste in moving or reaping the wheat by the dropping out of the seed.

It will be seen in this matter, how much a farmer's success depends upon an accurate knowledge of his business. Even in so small an item as the cutting of grain, the owner of fifty acres would lose three hundred dollars, by harvesting a few days too late. There are many other farm operations in which accurate knowledge is quite as important. Is it any wonder that so many of our farmers do not make money when there are a hundred holes in their pockets, through which the money is dripping out in dollars, dimes, and cents. The whole year is a scene of prodigal waste, for want of a little knowledge. Wood is wasted for want of a good stove, or a tight house. Ashes are wasted for want of a dry place to put them. Fodder is wasted for want of a tight barn to shelter cattle, in the winter nights. Manures are wasted for want of a barn cellar, and sheds, and absorbents. Labor is wasted for want of manure to produce maximum crops. Is it strange with all these leaks, that the farmer's till does not fill up faster?—*Homestead.*

TURKEYS.

Benefit of a Cross with Wild Stock. Mr. N. Call, of Allenstown, N. H., informs us that he has kept in his flock of turkeys a wild male, and the result is that the young ones from him are from four to five pounds heavier, at five months old, than his turkeys formerly were, though kept precisely in the same way. Mr. C. could spare some of the half wild ones.—*Boston Cultivator.*

VALUABLE TO FARMERS.

MR. JOHNSTON'S ANSWER TO MR. LADD.

The following, from the pen of John Johnston, of Geneva, N.Y., is a rich experience, containing very much which might be imitated with advantage. We call attention especially to the benefits of thorough draining. Whether Mr. Johnston's delay of a year in the use of his barn manures, is a thing to be imitated on all lands, we have doubts, as he seems to have. On friable loams, and on any soils that are well drained, is it not an economy of labor and productive of equally favorable results, to apply a large portion of the farm manure to the summer crops, to plow or harrow it in to a reasonable depth, according to the compactness of the soil, and then do the "turning over" and mixing with the plow, harrow and cultivator, as you prepare the ground and cultivate the crops? It has always seemed to us, that by the addition of suitable divisors, as the manure accumulates during winter, it may be ready to go into the soil early in spring, and thus a year be anticipated, as compared with Mr. Johnston's plan, and equal, or nearly equal results be obtained, with a very considerable saving of labor. But to Mr. Johnston's experience;—

Rotation of Crops.—My rotation for wheat previous to my land being all drained, was to keep the driest and best wheat land in wheat and fallow, alternately. Some of the fields were so treated for thirty years. I sowed clover always in spring among the wheat, and generally sowed plaster after the clover seed. When the wheat seemed likely

to produce heavy straw, I did not put on the plaster till after harvest. If the clover was good in the fall, and not intended for hay the following year, I pastured it with sheep. If not good I did not pasture until May, and in June plowed again for fallow.

I generally made manure enough from clover, straw and hay, (buying hay when cheap,) to manure from fifty to seventy-five acres of wheat. The manure was put in large heaps, each containing from 200 to 300 loads, and turned at least once during damp and rainy days in haying and harvest. This plan I continued from 1822—the first of my farming in this country—until 1835. This course of farming enabled me to pay for my farm, and all the buildings then erected on the farm. But during the five years previous to 1835, I found this course was enriching the land too highly for wheat, that is, there was too much straw and no increase in grain. I then began to raise more corn and oats, applying the manure to these crops and the meadows, extending the land sown in wheat to seventy, eighty and over ninety acres annually. In this way, and by applying the manure, of which I made a large quantity and of rich quality, as I not only fed all the corn and oats I raised, but often bought from 1000 to 2000 bushels and fed also. In that way I kept up the productiveness of the soil, and even increased it.

Previous to 1835 I met with several severe losses by the wheat freezing out, or winter killing, as it is called, but *spring* killing should be the name. I had been reading for several years of the wonders worked on land in Scotland by tile draining, and in 1835, sent for a few tile from that country in order to have some made here; but it was not till 1838, that I could find a man that could make them. In that year, and again in 1843, I, along with others, had the misfortune of losing the whole of my crops by hailstones. This crippled my efforts in draining, yet I still continued doing considerable, and found that the *excess of two crops would always pay back the cost*, and on some of the wettest land, even the excess of the *first crop* would do a great deal more than pay the whole expense of draining. *There was no spring killing on the drained land.*

Manure.—My manure is made in sheds and yards, and either taken to the fields in spring and heaped there, heaped in the yards, or part both ways, and thoroughly pulverized by rotting. If not rotted sufficiently, it is turned in the summer. It is applied to wheat land on which I intend to raise corn next season, and is spread in September or early in October. The land is not plowed till next May. I often manure land in the fall that I intend to fallow for wheat the next season. Long experience in this way of using manure, has convinced me that I get far more benefit from it in corn or oats, and as much in wheat, although a year is lost in reaping the benefit from the latter. By lying spread for six or seven months, all seeds of weeds that heating did not destroy, will vegetate, and are plowed down and destroyed. Manure taken from the yard in spring, any applied to corn, oats, barley or potatoes, is worthless for the first crop; so I have always found it; on other kinds of soil it may act differently.

Sowing Wheat. — I prefer sowing wheat from the 10th to the 20th September, but can not tell how much high manuring will hasten its ripening. Very high manuring will retard the ripening, but the application of 280 to 300 lbs. of salt will hasten the maturing at least four days, besides giving a brighter straw, more plump grain, and finer sample every way, and I think that 400 lbs. per acre might pay still better. I use much salt, and think it prevents in a measure rust and mildew.

Underdraining. — Thorough underdraining hastens the maturity of wheat wonderfully, which therefore escapes the midge. Before my neighbors drained their lands I have seen their crops so injured by this insect that they did not have more than five to seven bushels per acre, while I would have twenty-eight to thirty-three and over, and I lost some by midge.

Salt as a Manure.—I salted fourteen acres of wheat last September; it now surpasses any I have seen, and is much superior to eleven acres in the same field on which no salt was sown, both being sown on the same day, and fallowed in the same manner. I have no doubt it will mature at least four days previous to the eleven acres, and those four days may put it out of danger from the midge. I get better results from salt when dry weather prevails for some time after it is sown, and I sometimes sow seventy-five barrels in one season,

buying it at wholesale at the manufactory. I generally sow it immediately after the wheat is sown, but if I was to be guided by theory I would say sow it before, and harrow in with the wheat. I have often thought about trying it in this manner, but have not done so.

JOHN JOHNSTON.

Geneva, N.Y., May, 1858.

VALUE OF BUCKWHEAT.

A LATE issue of Hunt's Merchant's Magazine, in an article upon buckwheat, thus speaks of it concerning its properties as an edible; Considering the good qualities of buckwheat, it is probably less appreciated than any other bread grain. Writers on agricultural products seem to eschew it as food for man, and regard it only as a mischievous adulteration of wheat flour, or as a product of poor soil for cattle. It is of a totally different family of plants from the cereals, and will flourish on sandy hill-sides which are barren for other grain. It is probably the most easily cultivated, and the cheapest bread grain in the world. It is extensively cultivated in Belgium and some parts of France, where it forms the basis of food for the inhabitants. Though its properties are very different from wheat, it is, nevertheless, quite as rich in all important compounds, and in extremely cold weather it is more substantial than wheat. It is, however, less digestible, and apt to disagree with weak stomachs, or persons unaccustamed to it. By analysis, buckwheat is second to wheat, in gluten, but deficient in starch. By the addition of one-fourth quantity of oat or Indian meal to buckwheat flour, the bread is very much improved."—*Me. Farmer.*

PROPORTIONAL AVERAGE OF CROPS IN SCOTLAND.

IT may gratify a reasonable curiosity in some of our readers to be informed in regard to the proportion which the various field crops raised in Scotland bear to one another, or, in other words, what proportion of every 100 acres in tillage is occupied by each of the crops commonly cultivated. This information may not, indeed, be of any direct *utility*, but can not fail, we think, to be highly *interesting*, especially to those who have the means of comparing the facts with similar statistics in their county or State. The information of this description which follows, is derived from the tables of Scottish Agricultural Statistics, which have been recently published. The proportion varies in different counties, but taking the whole country together, the proportion of the different crops in every 100 acres, is as follows:

	1857.	1856.	1855.	1854.
Wheat	6.274	7.428	5.419	4.765
Barley	5.578	4 675	5.271	5.879
Oats	26.391	25.912	26.449	26.330
Rye and Bere	.776	.564	.594	.621
Flax	.049	.077	.093	.189
Vetches, Turnip seed, &c.	.607	.586	.517	.421
Beans and Peas	1.206	1.277	1.212	1.243
Turnips	13.403	12.979	12.731	12.292
Potatoes	3.931	4.213	4.163	4.052
Mangold	.079	.100	.064	.053
Carrots, Cabbage, & Rape	.144	.125	.063	.074
Summer Fallow	.523	.436	.637	.749
Grass & Hay, rotation.	41.045	41.628	42.777	42.339
	100.	100.	100.	100.

It will be seen at a glance at the above table, that oats are cultivated to a much greater extent than any other grain; and that the large proportion of the soil, devoted to grass and turnips, besides the permanent pastures which are not included in the above, indicates very manifestly that the feeding of stock for dairy and other purposes, must be one of the principal branches of agricultural industry in that country.

The following additional items in regard to the crops of Scotland during the past year, may be interesting to several readers:

Of wheat, the whole amount raised was 6,154,986 bushels, and the average produce about 28 bushels per acre.

Of barley the whole amount raised was 6,494,534 bushels, and the average produce about 32 bushels per acre.

Of oats, the whole amount raised was 32,750,763 bushels, and the average produce about 33 bushels per acre.

Of beans and peas, the whole amount raised was 1,037,760 bushels, and the average produce about 22 bushels per acre.

Of turnips, the whole amount raised was 6,690,109 tons, and the average produce about 14 tons per acre.

Of potatoes, the whole amount raised 430,468 tons, and the average produce about 2¾ tons—ranging, however, in different counties, from 1 ton 8 cwt. to 5 tons 11½ cwt. per acre.

These averages, it will be observed, are considerably higher than any averages which have as yet been reached, according to census reports, in this country. The larger crops of wheat, &c., of

which Scotland may boast over this country, are unquestionably owing principally to a higher and more careful cultivation. An advance in our mode of cultivation, would give us also an advance or increase in our crops. Probably neither country has yet come very near to the end of all perfection.—*Canadian Agriculturist.*

DISEASES OF WHEAT.

Mr. Granger:—The wheat crop of this and other sections of our country, from which I have heard, have become strangely affected with rust upon the *blades*, while the stalk, in many cases, shows no symptoms of the disease.

This, though novel, is, I believe, uniformly the case, not only with the red, but also with the white varieties of wheat. The latter though subject to this smut, very rarely takes the rust, while the former is generally subject to the disease. The difference, I think, arises from the early maturity of the white varieties. They ripen ten or twelve days earlier than the red, and escape the warm showers of June, which, by forcing the growth of the later kind, burst the sheath or outside covering, and when this occurs, the rust will surely follow. The extent of injury to the crop, will then depend upon the time required for its maturity. If it have many days to run, the disease will get the better of the race, and will either destroy the crop entirely, or abstract so much of its nutriment as to make the grain exceedingly light.

After experimenting some twenty or more years with different varieties of wheat, I come to the conclusion, that the earlier the maturity of the wheat, the less liable it was to disease. But I have never yet found an early kind that was adapted to our cold swamp soils. They are not so hardy as the red varieties, and while the latter will withstand the freezes and thaws of our changeable climate, the former is liable to be frozen out and killed. It became necessary, therefore, that I should only use the most hardy kind, and these being late and liable to rust, my great object was to hasten the maturity of my crops, by giving increased *heat* as well as fertility to my soil. The first I accomplished by thoroughly ditching my land, and the latter by the use of Mapes' Phosphate of Lime. My experiments with this fertilizer have now run through the space of four years, and the crops which I have reaped from it, have not been in the slightest degree injured by the rust.

To satisfy myself of the value of this manure, I have generally omitted to apply it to a few rows, and the wheat upon these rows, though not so much injured by the rust, as was the case before I thoroughly ditched the land, was nevertheless injured to some extent, and was always a week or ten days later in maturing than the rest of the field; nor did the disease appear, until about the time of reaping the fertilized part of the field. This was conclusive evidence to my mind, that the escape of this part of the field from the disease was entirely owing to its early maturity.

The difference of product is 9 to 12 bushels per acre; that is, 200 lbs. of Mapes' Phosphate of Lime, will give a product on my land of 15 to 18 bushels per acre, weighing 58 to 61 lbs. The land without the aid of this fertilizer, will produce 6 to 7 bushels, weighing 52 to 55 lbs., when it escapes the rust. Succeeding crops also derive much benefit from the remains of this manure. The wheat crops of our county, the present year, will, I think, be the lightest that have been made in many years, and the injury has no doubt been caused by the heavy rains and sudden changes of weather, running into extreme heat and cold, giving a premature growth a day or two, and then blighting the tender plant. But let none of our farmers be discouraged in the culture of wheat, for every branch of industry has its mishaps and disasters. Wheat and cotton on our upland, and wheat and corn on our cold swamp land, will be found the most profitable, as a general thing. But I advise our farmers not to cultivate poor land. Expend your surplus means for fertilizers. If you have no spare cash, sell half your land to raise it; or if need be, go in debt for fertilizers—and this is the only thing a farmer should go in debt for. By doing so, you will double your gains, and save half your labor.—*Washington Dispatch.*

FLAX CULTURE IN GERMANY.

Hon. T. C. Peters, of Darien, sent us the following extract from a letter from E. G. Freedman, in relation to the Culture of Flax. This is a very important matter in our State. In 1855 there were 11,764 acres in flax producing 4,907,-

556 lbs. of lint, and 87,093 bushels of seed. The culture of flax, at present prices and with present demand, will pay. We hope the publication of this note of Mr. F. will call attention to the subject. Mr. F. says:

"When traveling in Moravia, Germany, I became interested in a new preparation of fibre of flax. In that Province flax is reaped when ripe, cut into lengths of some three to five inches, dried; then boiled in ley of potash; then dried in an oven and subjected to the action of a machine like a cotton picker. the result is a fiber similar to cotton—more valuable. It is mixed with wool and woven into cloth, or woven alone.—Now, with the use of American Reaping Machines, cheapening the cost of harvesting, will not this process furnish a very cheap, material—taking into account the value of the oil pressed from the seed. —*Journal of the N. Y. State Ag. Soc.*

SIZE OF FARMS IN AMERICA.

In the wheat region, south of Lake Ontario, the farms are usually from 150 to 200 acres in extent, though many are much larger. The farm-houses are roomy and comfortable, impressing one favorably with condition of the occupants. The female members of the family have ample employment in the cleaning and cooking departments, and the table at the different meals is loaded with a profusion of dishes. House servants are dispensed with as far as possible. Butcher-meat appears at breakfast, dinner, and supper. The Americans no doubt eat a vast deal too much of such stimulating food. Indeed, I do not think that any class in England consumes so much butcher-meat as all classes do here. It is a remarkable circumstance that farms have a tendency to decrease in size more rapidly where the land is poor than where it is rich.—*North America; its Agriculture and Climate. By Robert Russell.*

LEGISLATIVE FARMERS' CLUB, HARTFORD, CONN.

From the reports of these legislative meetings in the *Homestead*, we copy the following, as seeming to us, to possess a general interest, but of course without indorsing all the opinions expressed.

Mr. Hitchcock, of New-Preston, said he was familiar with two families of Short-horns,—the Duchess family, bred by Mr. Bates of England, which were bred exclusively for beef, and the Princess family, bred for milk and beef both. These latter, like all the Durhams and Short-horns are excellent feeders, and when in milk give an abundance of excellent milk; he has bred them for years, and has never had but one poor milker in his herd; and when dry they take on flesh very rapidly. He says nothing about thorough-bred Short-horns for work, because he never makes steers of them; but grades make fine oxen. The Short-horns thrive well on Connecticut soil, and beyond a doubt will make more, and better beef on equal amount of food, than any other breed that we can get.

Mr. Clark, of Lisbon, has individually, experience with natives only. He laid down the only just principle of judging of any animal or bred of stock—that the whole expense of cost and keeping should be set off against the profits, and a just balance struck. In following this rule he thought that the balance would preponderate in favor of the native stock.

Mr. Weld asked for some characteristics of the native stock, and would like to know if any one could refer with certainty to native stock, that for only five generations could be proved to have no foreign crosses.

Mr. Tuttle, of Hamden, has had experience in feeding and fattening; he is in the habit of going West, and selecting cattle to fat, and bringing them east, buying and selling on the road. Last year he fed two Devons and five natives —steers, all were fed alike. The natives throve best, and made the best beef. The Devons weighed 1300 each, and the heaviest natives 1600. For working oxen he prefers the Devons; but for milk the natives are better and so are the Short-horns. The cattle should be adapted to the soil; for Iowa he recommended grade Durhams, rather than our red cattle, but for Connecticut our own native breed is best.

Mr. Seward, of Southington, has two neighbors; one of them goes west of the Hudson, every spring, and brings back a drove of calves which he sells at $3 to $9 each, and has filled Southington with them. They eat voraciously, are poor for work, good for next to nothing for milk; another neighbor bought some Durham stock of Norman Porter of Ber-

lin, and of Paoli Lathorp of South Hadley, Mass. With this stock he has improved the stock in his neighborhood.

Hon. Mr. Kellogg, of New-Fairfield, spoke of Devons as poor for fattening, grade Devons better. He thinks he has seen the pure native breed, though he can not prove them pure for five generations. He mentioned the same class of stock, mentioned as coming from west of the Hudson; he bought ten calves from Pennyslvania of a drover at $4 each—they eat as much as three-year-olds. Three died, and he thought he was the gainer—longer he kept them the smaller they grew, and the more they would eat. He disposed of them before they disappeared altogether; he thinks this is the unadulterated native blood.

(Is this fair to the old American stock? That there has been a great deal of bad breeding and a deal of worse feeding and miserable neglect, we will admit. But we have not yet reduced all the descendants of the fine cattle our ancestors brought over into the veriest land sharks. —Ed).

Mr. Battell, spoke of the excellent cross made by breeding a Durham bull with native cows, and referred to the very superior dairy herd of Mr. Collins of his county, which are grade Durhams. A general law recognized by breeders to improve common stock, is to breed from thorough bred males. He has bred Ayrshires, and values them for milk, and as milch cows thinks the breed well adapted to Connecticut; they thrive on scant feed, give an abundance of rich milk, but are not at all adapted for working oxen, and do not fatten so well as many other breeds. He spoke of the original importation of Devons by the Messrs. Hurlbut of Winchester, to the excellence of that breed for work, and of the grades for milk, also of many excellent milkers among thorough-breds. The Devons as a breed give an average quantity of milk, as much as common cows, and it is always rich. A cow of more than one-fourth Devon blood is seldom a great milker.

Mr. Warren, of Watertown, said grade Devons are relied on as milkers in his town, and are counted as the best milch cows. Durhams are at a discount. A Watertown farmer won't have a pied cow on his farm. He is familiar with high grade Devons, that are long in milk, yield abundantly, and in summer make a pound and three-quarters to two pounds of butter daily.

Mr. McCrone, of Enfield.—Natives have no fixed qualities or characteristics; this results from bad breeding. If we would classify our native cattle we must trace them back to the original breeds by some marked characteristics of predominant quality. We have no such thing as a native *breed*, but a mixture of many, either kept in a tolerably good state by judicious, or run out by injudicious, breeding. There is a necessity that the animal should be adapted to the location. The Durham for beef has been perfected in England; it will not do well at all in the more rigorous climate of Scotland, nor in Enfield, on a common farm. Taking adaptation as a criterion, the Aryshires seem to be the best cattle for us. Doubtless at some period a cross has been made between the mountain cattle of the highlands and the more robust breed of the English lowlands, and thus the hardy Aryshires were formed,—a breed of excellent milkers, of good constitution, and doing well on poor fare, and fatten easily.

Mr. Corbin of Guilford, thinks many of the natives in Guilford can show pedigrees of more than five generations without admixture of foreign blood. They are red, high spirited, well formed and docile; the cows give good, rich milk, and plenty of it, and hold out many years. He prefers the natives.

Hon. Mr. Kellogg, of New-Fairfield, said it was customary for Fairfield Co. farmers to buy Western three or four-year old steers, usually grade Durhams of a prevailing red color, for fattening, paying $40 to $60 per head, and doubling the money on them in a year.

Mr. Curtis, of Woodbury, spoke of the Devons as workers. They are sagacious, active, muscular and enduring, live on shorter fare, and look better than any other class of working cattle. Crossed with Durham blood (probably Devon bulls on high grade Durham cows) the Devon color predominates and size attained. As for milk, he had a seven-eights grade Devon that gave 22 quarts of very rich, high colored milk daily.

Prof. Johnson, of Yale College, said he never owned a cow, and perhaps never should, yet was brought up a dairy boy on a large dairy farm in Lewis Co., N.Y., and knows the so-called native cat-

tle pretty well. The fact is the only native American breed of neat stock is the Buffalo or Bison; all we have came from Europe, and show more or less the characteristics of the stock of England, Holland or France. They have been bred with no care. Improved cattle are from herds that have been taken care of, and whether they are good, bad or indifferent, depends on the care they have had. That is the best breed which in any region yields most in proportion to expense of keeping, etc. Our natives may be best—to make them so we must breed with an object. Such cattle as take the premiums in England, would die for the flies in this country; they are so fat they can hardly move. An English breeder of Durham Short-horns does not eat Short-horn beef; he has some of the rough mountain cattle of the Welsh or Scotch highlands, fatted on his best grazing lands for his own table. The Durham beef is for the masses, like the mutton of the Cotswold and other long-wooled sheep. Thorough-bred cattle perpetuate their peculiar excellencies in their descendants. Common cattle fail to do this, or can not be depended upon. He knew a cow which gave 32 quarts of milk a day, but none of her calves inherited this trait.

Mr. Warren thinks it is the feed that makes the stock—the best fed are the best cattle. He goes for natives, native American cattle.

Mr. Munson, of New-Fairfield, spoke in favor of well-kept natives, and of crosses with the Short-horns. He had a grade Short-horn that gave 30 quarts of milk a day.

Mr. Maine, of Ledyard, advocated the natives for all uses; they deteriorate by in-and-in breeding, but may be kept up by change of blood.

Mr. Collins, of Somers, favors Devon grades for work and milk—they are as good as the best,—better milkers than the Durham grades. Small cattle come from scant feed.

Mr. Miller, of Torrington, has crossed natives with Devons and with Durhams, the result being that he gets the size of the Durham, the color of the Devon, and the quality of the native.

Mr. Seward condemned the practice of yoking young steers between two yoke of old cattle, and drawing wood with them all winter. It spoils them either by stinting their growth, by over-work, or by making them lazy by not forcing them to work.

Mr. Curtis, of Woodbury, said that stock begotten by high fed males is inferior, uniformly. Devons possess the valuable quality of transmitting their color to many generations.

Mr. Sanford of Redding, gives his star calves to his boys when fifteen years old, to break, and when they are two years old they earn their keeping—not putting them to hard work, however. It makes good cattle, and makes farmers too.

PATENT OFFICE — AGRICULTURAL DEPARTMENT.

Having, some months since, with less consideration than is our wont, admitted an article reflecting somewhat upon the gentleman at the head of the above department, and having noticed what seemed to us rather uncandid statements concerning him, we now copy the following from the *Washington Union*, on the ground that it is but fair that our readers and the public should look at both sides;—

Vindication of the Agricultural Division of the Patent Office.

Agricultural Committee Room,
June 4, 1858.

Sir: A communication has recently been received by the Committee on Agriculture from Captain A. A. Gibson, of the United States Army, implying that, for some months past, a series of assaults have been made on the Patent Office, in several newspapers, and especially on Mr. D. J. Browne, the conductor of the agricultural division of that office, in expressing a desire that this committee should present to the public, through some appropriate channel, a statement in regard to the truth or falsity of the allegations herein referred to.

Believing the present system adopted by Congress of encouraging agriculture to be of great utility and importance to the country, and that any abuses or mismanagement on the part of those to whom its administration is intrusted, should be corrected, in order to insure public confidence and the fullest measure of success, the committee beg leave to request that you will furnish them with any information at your command on the following points:

1. Have agents been sent annually to Europe by the Patent Office at public expense, and, if so, for what objects?

2. Did the seeds obtained from Europe generally exist in this country prior to the time of their importation, or were they selected with a view to the wants and economy of the farmers of the United States?

3. Could you suggest a more feasible plan for distributing the seeds, cuttings, &c., obtained by the Patent Office than the mode practised heretofore?

4. From the knowledge in your possession, are you convinced that the Agricultural Reports of the Patent Office have been prepared in a manner that would render them useful and acceptable to the public?

5. What was the history, experience, or acquirements of Mr. Browne previous to his entering into his present official station?

I have the honor to be, very respectfully, your obedient servant,

WILLIAM G. WHITELEY,
Chairman.

Hon. JOSEPH HOLT,
Commissioner of Patents.

UNITED STATES PATENT OFFICE.
June 5, 1858.

SIR: In reply to your communication of the 4th inst. requesting information in regard to certain allegations against this office, herewith I have the honor to transmit the following statement, which is based on testimony contained in this department, and on knowledge derived from persons connected therewith:

I answer to the first query, I would reply that agents have not been annually sent to Europe by this office, and the only instances in which expenses have been incurred in this manner were by Mr. Browne in 1854 and 1855, for purposes hereinafter mentioned, and Mr. Clairborne, in 1857, "to collect and report information in relation to the consumption of cotton."

In answer to the second query, I would state that the seeds, cuttings, &c., which have been procured by the office have been obtained from reliable sources, mostly in Europe and this country, at wholesale prices, the selections having generally been made with discrimination and with reference to their adaptation to our wants and economy, while due diligence and skill have been used in their transportation, preservation and distribution. Large portions of these selections have been successfully cultivated in various parts of the United States, increasing the products of the farms and gardens, and enhancing the comforts, luxuries, and wealth of the people. In consequence of this a new field of enterprise has been created, more than two hundred seed-stores established in the interior, and the demands for approved seeds of various kinds, foreign and domestic, have been fully doubled within the last four years. Among those imported might be mentioned a few the culture of which has been extended, and bids fair to add untold millions to the future wealth of the country. Although it is admitted that many of these seeds or varieties analogous were known to the seedsmen of some of our larger cities, there existed no small portion of the inhabitants of the United States who, from the remoteness of these establishments, were deprived of their benefits; and there were thousands of cases in which they had no knowledge of such seeds before. Through this bounty of government, with the privilege of transmitting these seeds free by mail, they soon found their way to the most distant homesteads of the frontiers.

With regard to the importation of seeds from Europe, the office has been actuated by the same principles as seedsmen. They can usually be purchased there in larger quantities, on better terms, and in many cases superior in quality. Those of the Brassica tribes, for instance—such as cabbages, turnips, &c., grown in the cool, moist climates of the north of Europe, in the absence of the hot, scorching suns and numerous insects, which, in other countries, affect the stalks and leaves of these plants—can be raised at a cheaper rate and better quality than can be done in the older settled parts of the United States; and, besides all varieties that are liable to be affected by cross fecundation are cultivated at a distance from one another, and even plants of Ameri-

can origin have been improved by careful management. Similar reasons could be advanced in favor of peas, beets, celery, &c., imported from abroad.

In reply to the inquiry concerning a more feasible plan of distribution, it is obvious that change is desirable. It may not generally be known that the apartments in the Patent Office in which the labor of packing the seeds has been performed were, perhaps unavoidably, for several years, accessible to many persons other than those properly engaged therein—indeed, to the public; and that the Commissioner's frank, in some instances, was obtained and used for carrying through the mails seeds not selected by the office. From lack of knowledge on the subject, or through inadvertence, individuals were liable to send out seeds at inappropriate seasons, or to localities to which they were not adapted, and cases have been known in which franks were used to cover seeds procured from other sources; while there is cause to suspect that in some instances frauds were practised with a view of throwing discredit upon the office. During the past winter and spring, however, a salutary reform has been realized in these particulars: The rooms in which the operative force has been employed have been entirely private; the work of packing and distributing has been executed under the supervision of a resposible clerk, assisted by men of intelligence and experience; and to avoid mistakes seeds of only one variety have been opened at a time for putting up. In short, the utmost care has been exercised to secure accuracy, justice, and dispatch in these important duties.

It has long been the opinion of the chief manager of this division that these seeds, cuttings, &c., should be distributed, when practicable, throughout the country in larger quantities than has been the case heretofore, and to competent and responsible parties, such as agricultural societies, county clerks, seed growers, nurserymen, &c., the most appropriate agencies, he conceives, for the execution of the implied trust. In cases where the societies might not find it convenient to make these tests upon a large scale, they might at least be able to make distributions among their members, offering prizes for successful competition, and requiring a report from each, in demonstration of the utility or inappropriateness of the objects of experiment. The early and accurate information thus afforded to seedsmen, and others interested, would doubtless be of value. In order to facilitate the transmission of the packages by the societies to their members, he recommends that to each parcel should be attached a suitable stamp, furnished by the General Post Office, which would allow it to pass free from any post office within the territory of the United States by a single carriage, only subject to be cancelled or checked by the postmasters, in the same manner as adopted at present on letter stamps.

In reply to the query in relation to the manner in which the Agricultural Reports of the Patent Office have been prepared, I deem it only necessary to say that, from the eagerness with which they have been sought, and the unanimity of the verdict, not only of the American people, but of the civilized world, in their favor, no doubt can exist is relation to their usefulness and acceptability. No series of documents, indeed, have ever emanated from the government which has been more highly prized. They are well approved repositories of useful facts, peculiarly suggestive in their character, and prepared with great care, assiduity, and acknowledged ability.

The fifth interrogatory renders necessary a recital which nothing less than your expressed wish, or justice to a meritorious public officer, could make pertinent in this connection; but since it appears to be important that information should be given in regard to the fitness of Mr. Browne for his present position, I shall present a condensed account which I need only say is based upon authoritative and reliable data, and attested by persons who have been cognizant of his career, showing that he has served a regular *apprenticeship*, or course of preparation, by actual labor, in every branch of knowledge his present vocation would seem to require.

In 1822, at the age of eighteen, we find him in charge of the chief operations of the dairy farm, containing more than fifty cows, of General Thomas Taylor, in Quincy, Massachusetts, which required his attention and supervision from half-past two o'clock in the morning till the closing in of the evening, and often even until ten at night, seeing that the milk was properly guaged, registered, and made ready for market; and he also

participated in the general labors of the establishment, which was conducted upon the most scientific principles of that day. Previous to this period, his theater of action had been mainly confined to the homestead of his father, in New-Hampshire, where he had pursued the course of labor common to that region. In the spring and summer of the following year, we recognize him with Mr. Daniel Burnham, in Newburyport, engaged in cultivating garden vegetables and seeds on an extensive scale.

The seven succeeding years appear to have been chiefly devoted to the acquirement of his academic education. During most of this period he was either studying or employed in teaching, yet making brief excursions at intervals in several of the Atlantic States, with a view of learning some of their natural features, internal improvements, farm operations, &c. In 1831–'32, we find him located in Boston, editing a monthly publication called "The Naturalist," and at the same time pursuing the study of the Romanic languages under Professor Bachi, of Harvard University, and comparative anatomy under the distinguished Drs. Spurzheim and Warren. In the winter of 1832–'33, we meet with him on a cruise in the United States ship Vandalia, in the West Indies, in the capacity of a naturalist, passing most of his time on the island of Cuba and the Florida Keys. While in Cuba, he resided for several weeks on the coffee and sugar plantations, where he carefully studied their economy and management. In the September following we discover him on the Peak of Teneriffe, whither he was sent on a private expedition to study the climate and seasons of that mountain at different altitudes, and to witness the effects thereof on vegetation, as well as to determine the heights of various points by instrumental measurement, the results of which will be found in his "Letters from the Canary Islands," giving a detailed account of his excursions, and the natural features, resources, history, and social condition of those islands. We next meet with him in the Merino sheep-walks of the south of Spain, where he elicited from the shepherds important information concerning the management of their flocks; and again in the Huerta of Alicante, a rich valley noted for containing the varied productions which flourish to the best advantage in the south of that peninsula, acquiring additional information in regard to the different systems of agriculture, as practised by the Carthagenians, Romans, and Moors. After visiting the Balares at the south of France, he again makes his appearance on the Island of Sicily, investigating its productions. Towards the close of 1834 we find him attached to the ship-of-war Erie, on her passage to Rio de Janeiro, provided with meteorological and other instruments, making physical observations, and touching at Madeira and the Cape de Verds, an account of which is published in the American Journal of Science, in 1836. Later in the season, we again meet with him on a cruise in the same ship up the Rio de la Plata, tarrying at Montevideo and Buenos Ayres, and making journeys inland, which afforded him ample opportunities for observation. In the early part of 1835 we follow him to the tea plantations near Rio, to the cotton fields of Pernambuco, and to the sugar estates of Bahia, indefatigably pursuing his researches there. In April of the same year we again fall in with him on shipboard, with a collection of tropical trees, plants, and seeds, which he obtained in the last-named province, on their way to Drayton Island, Lake George, St. John's River, in Florida, by way of New York, for the late Mr. Z. Kingsley, then proprietor of that island. In the December following we observe him with interest before a committee of the Massachusetts legislature, in the capacity of a civil engineer, with the plans and estimates of his own making, advocating the claims of a wealthy company for constructing a railroad between Boston and Newburyport. During the summer and autumn of 1836 we find him surveying and sounding a portion of the river Niagara, preparatory to making a chart of it and the adjacent shores for the East Boston Timber Company. In the winter following, he is engaged in the laboratory of Dr. Jackson, in Boston, prosecuting certain inquiries in geology and agricultural chemistry. During the spring, summer, and autumn of 1837 he again attracts our attention on the Niagara, making surveys for the same company, experimenting with bone-earth taken from an ancient tumulus on Tonawanda Island, and testing its efficacy in the production of turnips. The two years following, he was employed by the State of New-York as resident engineer on the western division of the Erie canal

enlargement. While thus occupied, he aided in perfecting the plan for constructing the double combined canal-locks at Lockport, drained some thousand acres of overflowed lands by dyking the banks of the Tonawanda and Elliot creeks, conducting the accumulated waters of the adjacent farms into the Niagara by opening large drains. In connection with these duties it became necessary to construct a large well-culvert under the Erie canal, and to rebuild and to extend, in midwinter, the dam across Tonawanda creek. The drainage of these lands has been regarded, in an agricultural point of view, as the most important work of the kind ever performed in that State. The greater part of 1840 we notice him at Schenectady, employed by the Prussian government to report on the railroads of the United States. During the following winter and spring he is occupied in preparing for several bankers in New-York a series of tables for facilitating the computation of interest, exchanges, annuities, &c., also in contributing several articles on the currency, the tariff, and other subjects connected with political economy, to the Merchant's Magazine. For a year preceding July, 1842, we again meet him in Brooklyn, as an engineer in constructing the Atlantic Dock. During another year we find him on the island of Cuba pursuing the same profession, making a railroad, and perfecting the plan for a large ingenio (steam sugar mill;) also experimenting in sugar boiling, with the view of determining the most economical agent for absorbing the free acids in the cane juice, and studying the properties and uses of the native trees, the habits and economy of the honey bee, and the effects of the climate on the domestic animals and exotic plants. For the next two years he was engaged in the preparation of his treatise on the "Trees of America," making several journeys through Massachusetts, New-York, and other States, visiting gardens, nurseries, and celebrated trees, as well as dock-yards, manufactories, and other places where timber is wrought, to obtain minute information for enriching his work. Within this period he served as a member of the Board of Agriculture of the American Institute of New-York, and also as corresponding secretary of the American Agricultural Association. Towards the close of 1845 we find him independently relinquishing the post of resident engineer on the Northern railroad, in New-Hampshire, on the ground that, if the road were built on the route insisted upon by the directors, it would prove disastrous to the stockholders—a position he was justified in, and which was confirmed by the result. For nearly six years preceding the autumn of 1851 we meet with him in the large agricultural warehouse at present conducted by Mr. R. L. Allen & Co., in New-York, performing the editorial duties of the "American Agriculturist," preparing catalogues in several languages, and attending to other business connected with the establishment, independent of which he also carried through the press several volumes treating on subjects pertaining to agriculture and rural economy. During most of the year preceding the 9th of June, 1853, when he took charge of the agricultural division of the Patent Office, we find him in the United States Census Office, chiefly occupied on agricultural statistics and in superintending the printing of the preliminary or abstract reports.

In September, 1854, and again in 1855, Mr. Browne was sent to Europe by the United States Patent Office for the purpose of obtaining information on agricultural subjects, and for making arrangements to procure in future seeds, cuttings, &c., from the most reliable sources, and upon the most advantageous terms not only in Britain, but on the continent, as well as from other parts of the globe. The first year, during an absence of only nine weeks, he traveled through portions of England and France, visiting several of the principal seed establishments of those countries, and obtained portraits of some of the best breeds of domestic animals, with a view of illustrating the Agricultural Reports, and a large quantity of valuable seeds, cuttings, and tubers, the results of experiments with which, in various parts of the United States, in many cases proved highly satisfactory. On his second mission he passed through England, France, Belgium, Holland, Prussia, Hanover, Hamburg, and a portion of the kingdom of Denmark, being absent seventy-seven days, having traveled during this fatiguing journey a thousand miles a week, visiting the principal gardens and agricultural establishments *en route*, and accomplishing the chief objects he had in view. Among those of interest which may be particularly noticed where his inspection of the "Exposition Universelle," at Paris, the

"Bloemistries," or flower gardens, and Haarlem Lake, in Holland, and the celebrated nurseries of Messrs. Booth & Sons, at Flottbeck, in Holstein. He also submitted, in person to Baron Von Humboldt, at Potsdam, a uniform plan for obtaining metereological information as connected with agriculture, in the various countries of the world, which, with slight modification, met his approval.

Hoping the information herein given may prove satisfactory in response to to your inquiries, I have the honor to be,

Very respectfully, your obedient servant, JOSEPH HOLT,
Commissioner.

Hon. William G. Whiteley, Chairman of the Committee on Agriculture, U. S. House of Representatives.

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Room Committee Agriculture,
June 7, 1858.

Sir: Your letter of the 24th ultimo, addressed to me as chairman of the Committee on Agriculture, alleging that various misstatements in regard to, and assaults upon the Patent Office, and especially on Mr. D. J. Browne, the head of the agricultural division of that office, have been made, and invoking from this committee some official expression in regard to the experience, practical knowledge, and fitness of Mr. Browne for the duties entrusted to him, has been laid before the committee, and I am requested to reply to you, that, from the information which the committee possesses in regard to Mr. Browne, they believe that, by long experience and previous pursuits, as well as by scientific study, both practically and theoretrically, he is fully qualified for the important duties committed to him, and that he has the full confidence of this committee.

I have the honor to be, very respectfully your obedient servant.

WILLIAM G. WHITELEY,
Chairman Committee on Agriculture,
House of Representatives, U. S.

To Brevet Captain A. A. Gibson,
U. S. A., Fort Munroe, Va.

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Having given place to a lengthy statement of the grounds on which the Committee rest their "full confidence," it is but fair that we should allow those who are dissatisfied with the doings of the Patent Office Agricultural Department to state the grounds of their dissatisfaction. The following will sufficiently explain itself, and the public will judge for themselves of the merits of the case.

Seed Department of the Patent Office.

At the April meeting of the Pennsylvania Horticultural Society, held in Concert Hall, a committee, consisting of Gen. Robert Patterson, Dr. W. D. Brinckle, Dr. Thomas McEuen, Thomas P. James, Esq., and Dr. A. L. Kennedy, was appointed to correspond with kindred societies and the authorities at Washington, on the manner in which the Seed Department of the Patent Office has been managed. The following letter has been addressed by the committee to Hon J. Holt, Commissioner of Patents:

Pennsylvania Horticultural Society,
Philadelphia, May 18, 1858.

Sir—Having been appointed at a stated meeting of the Pennsylvania Horticultural Society, held in Concert Hall, on Tuesday evening, April 20th, to confer with kindred societies and the authorities at Washington, on the subject of the distribution of seed by your office, we beg leave respectfully to represent:

That the chief object of Congress in originally directing said distribution, was the advancement of the interests of American agriculture by the collection of seeds of acknowledged value abroad, but unknown here, and dispensing them gratuitously to skillful farmers and gardeners, with the view of determining the adaptedness of the new seed to our soil and climate.

The disbursement of the public money for such an object has received general approval, and the society which we have the honor to represent has ever been ready cordially to co-operate with the department, in carrying out a measure dictated by so wise a forecast, and a regard for our highest national interests. Had the original policy of importing and distributing only novelties of value been faithfully adhered to, we should have been spared the duty of addressing you. Unfortunately a different practice now obtains; and calls for reform—a reform which we trust your administration will have the honor of initiating and of perfecting. Moreover, we feel that there is a propriety in addressing you on the subject at this time, inasmuch as a comparatively short period only has

elapsed since your induction into office, and the system, agreeably to which the said importation and distribution will be conducted under your administration has, therefore, in all probability, not been fully matured.

The evil to which we would direct your attention is the gross and palpable misdirection of the public funds, by expending them for the purchase in Europe of seeds which were long since introduced here, and which are familiar to all practically acquainted with tillage.—Seeds of the most common culinary vegetables, grasses and grains, have been imported, as well as such flower roots as are sold at auction in our large cities. A large proportion of the seeds recently sent from the Patent Office through the mails, have been known in this country for a quarter of a century, and many of them ever since the Revolution.

We cannot believe that any Commissioner of Patents designed that seeds of *Mignonette* and *Early York Cabbage*, and bulbs of *Hyacinths* should be distributed broadcast over the country, at government expense, nor that he ever authorized his subordinate, sent to Europe to make purchases for the department, to order seeds obtainable every where in the United States. Had it been deemed expedient to make such importations, there was no necessity of sending an agent to Europe, especially one who, upon his arrival, appears unfortunately to have been unable to discriminate between what we already had, and what it might be desirable to procure.

The unquestionable design of Congress that only such seed of value be obtained from foreign countries as would not probably reach us through commercial or other channels, has, therefore, been in a great measure frustrated, and that interest which the public bounty was designed to serve has been materially injured.

The practice complained of is manifestly *unjust to our own people who are engaged* as nursery-men and seed-growers, as it brings the purse and power of the general government into active competition with their industry. Unlike all others of the producing classes, the nursery-men and seed-growers are neither directly nor indirectly protected by a tariff. Their products are duty free. They make no loud complaint that there is a discrimination against them, but they respectfully and earnestly submit whether it is not unjust toward them, as a part of the body politic, to crush their industry by the purchase of foreign productions identical with those which they themselves produce, to be distributed by the general government, free of charge even for carriage, to all who will accept them.

An instance which has been brought before our notice by Mr. David Landreth, a prominent seed-grower in this vicinity, illustrates the impolicy and injustice of the practice complained of. Mr. Landreth originated, a few years since, a new variety of turnip, which he specifically designated, and the seed of which he distributed throughout the Union. It was eventually carried to Europe, and being there approved, was cultivated under its American name, *strap-leaved flat turnip*. This identical variety is now being distributed by the Patent Office, labeled, imported "from England," not because it is unobtainable of American growth —for the originator has distributed over seven thousand pounds of the crop of 1857—but because the agent entrusted with the importations did not possess the knowledge requisite to discriminate between native and foreign products.

The evils of which we complain bear heavily upon many whom we represent, and have already injured the great cause which we advocate. Permit us to hope that they will receive your earliest attention, and be promptly and permanently abated.

DOG TAX.

J. H. KLIPPART, Esq., speaking of a bill brought before the Ohio Legislature on the taxation of dogs, says:

"The bill is based upon the following facts: In 1854, there were 4,845,189 sheep in Ohio, valued at $8,031,854; in 1857, there were 3,215,039 sheep only, valued at 5,357,275, being a decrease of 1,626,550 sheep, and a decrease of $2,674,579 of live stock in three years. This decrease has been brought about, not because wool growing is unprofitable; not because the climate or pastures are unsuited for the growth and health of sheep; not because the labor is too expensive to take care of them; but because of the incessant loss of the best sheep by worthless dogs. It was therefore deemed proper to tax dogs in order to encourage sheep growing, and to save a loss of over two and a half mil-

lions of dollars of live stock in three years."

That is right. Lay it on, not so much to compel the dog keepers to bear an undue portion of the public burdens, for they are generally the least able, as to induce them to rid the world of the useless creatures.

We have no doubt that the damage to Ohio is as great as above estimated, and to the whole country it is at least ten times as great; not that the dogs kill twenty-five millions worth of sheep in three years, but in almost every part of the country they prevent the farmers keeping sheep as they otherwise would, and herein lies the damage.—Ed.

A RICH COMPOST.

A manufacturer of cassimers, once a farmer, and we reckon just as likely as not to be one again, writes us;—

"Our Co. have about 100 acres of land, most of which was very sterile and produced next to nothing. Last year we raised from 14 acres of corn about 700 bushels; and we cut something over 50 tons of hay.

"We make a compost from our mill, by saving the scouring liquor, which we put on to the heap every morning, which is composed of horse manure, card cleanings and dirt washings gathered from the side of the highway. We make in this way some seven or eight hundred loads each year."

Remarks.—A consequence will be, that the land, sterile as it was, will fast become very productive; and there will be a permanent productiveness, one that would last many years, even should the compost be withheld, or transferred to other lands.

If labor were ten dollars a day in that locality instead of one, it would be cheaper to work up that compost, than to let the scouring liquor and card cleanings go down stream, and then purchase guano for the land.

One pound of wool, for fertilizing purposes, is worth at least forty lbs. of common yard manure, and probably fifty. Soap suds are exceedingly fertilizing. Not one farmer in a thousand yet half estimates the washings from his own laundry.

If that land is of a peaty character "dirt washings from the highway" are a good substance for composting. If it is sandy, or gravelly, or an ordinary loam, well cured peat, or swamp mud, would be better.—Ed.

WHEAT MIDGE—FACTS WANTED.

We cheerfully give place to the following circular, believing that the replies to Sec. Johnson's inquiries will embody a mass of information of very great value.

New-York State Ag. Rooms,
Albany, May, 1858.

Ravages of the "Wheat Midge," "Hessian Fly," and other depredators on Wheat.

The ravages of the Wheat Midge in this country, so severe and continued year after year, forms one of the most important incidents in the history of wheat culture which has ever occurred. And the State of New-York is prominent as the scene of the depredations of the insect. The statitises returned to the State Agricultural Society in the year 1854, showed that the farmers of this State had that year experienced a loss of *several* millions of dollars from this pest; and in 1857 one of our citizens was injured to the amount of several thousand dollars by it; and in some sections of our State the wheat crop was almost entirely destroyed. These facts will serve to indicate to what an extent the wealth and prosperity of our State are at present affected from this cause. And the Executive Committee of the State Agricultural Society feel it to be a duty which they owe to their constituents and posterity, now when the whole history of this insect and its ravages are fresh in recollection, to gather up full information upon these topics, and embody the same in a report, which will give a clear view of the remarkable career of this insect, its habits and economy, and will form an authentic record of these important facts for reference in all coming time. They therefore issue this circular, with the

earnest hope of hereby obtaining the requisite information from each particular district in all the wheat growing sections of the State, not doubting but that the persons to whom this circular is directed, will be able, from their own knowledge or by conferring with a few of their neighbors, to give in answer to it every fact of value relating to this subject which has occurred in their vicinity. Replies more particularly to the following queries are desired:

1. In what year was the wheat midge (weevil as frequently called) first noticed in your neighborhood? From what direction did it appear to come to you? Was it very destructive for a few years after its arrival? Was the growing of wheat abandoned, and for how long a time?

2. What has been its history since? In what years has it been most destructive, and when has it been least injurious?

3. Has it wholly disappeared at any time; so that on examining the wheat heads in many different fields not one of the yellow maggots could be found?

4. Before midge came into your vicinity, is any instance remembered thirty years ago or more, in which a field of wheat was badly injured in the same manner it now is by this insect—with the heads rough and ragged and the kernels shriveled? If so, state the year and particulars, so far as remembered.

5. What other grains have been infested by this insect?

6. Have any varieties of wheat escaped injury?

7. Are crops upon dry hilly uplands less injured than those upon lowland invals?

8. What has been the amount of damage in your vicinity the past year, and the probable yearly damage since the midge came into your neighborhood?

9. What remedies have been tried, and with what success? Has any remedy proved effectual?

10. Has any parasite insect been seen which destroys the midge? If so describe it.

11. Has any damage to wheat been made by the "Hessian Fly" or other insect than the wheat midge? If so describe the same.

Finally, state any other facts of interest within your knowledge relating to this insect.

It is recommended that specimens of the wheat midge or any other insect supposed to be injurious, which may be observed, or any parasite insect which is supposed to destroy the wheat midge, be sent to the Agricultural Rooms. They can be sent in a quill, enclosed in a letter, and an examination will be made by Dr. Fitch, Entomologist of the society of all that may be received. The replies which may be received will be delived to Dr. Fitch, and a carefully prepared statement will be published, embodying all that may be ascertained in relation to the insect, which may be described, and copies will be sent to all persons answering these inquiries. Returns are requested to the Secretary, Agricultural Rooms, Albany, as soon as the questions proposed can be satisfactorily answered.

B. P. JOHNSON, Sec.

STONE WALL.

SOME of our readers will be laying up this kind of fence before we visit them again. Now, whatever the ground is, but especially if it be wet, do not fail to trench at least two feet, and fill up with cobble stones. The land, for twenty or thirty feet on each side, will produce enough more to pay a good per cent. on the extra cost, and the wall will stand twice as long.

The grand secret of laying a wall, to stand long, is to keep the inner end of the stones up quite as high as the outer, and to have nearly half of them run through—*binders*, as the stone-layers call them. Some people think that if you lay a wall, with the stones of each side pitching in against the other, one side will hold up the other. But it is not so; in that way one side will push down the other.—ED.

QUESTION AND AN ANSWER.

"*What is the best wood for a stone boat?*" If you want to wear it out in a short time, rock maple is the best, because it will wear smoother, and draw with less friction than any other. Or if you will always keep it housed when not in use, rock maple is best. But if

exposed to the weather it will rot; and if you mean to let your stone boat take care of itself, as too many farmers do, in thunder, lightning, hail and rain, and in scorching suns, you can get nothing better than white oak.

Saw the plank four inches thick for the fore end, and two and a half for the hind; and we will promise you that the fore end will be thinest soon enough, that is, if you put your load well before; and if you do not, it will draw the harder.

A wise man that we heard of, said it stood to reason that cattle could draw more down hill than up, for they could get better foothold.

Now if you load well before, and give a short chain, the oxen will get a capital foothold.

It is much easier for an ox to bear something on his neck, than to draw the whole by an exactly horizontal draft.—Ed.

A SECRET WORTH KNOWING.

I tried a curious experiment with a few potatoes this season. A year since, I saw a letter from a farmer, stating the great success that attended an experiment the writer had made the previous season. It consisted in inserting a pea in each potato set, and planting the potato set, in the usual way. The result, he stated, was a large yield of peas and a splendid crop of potatoes; but the most important result was the entire freedom of the potatoes so treated, from any disease, while those planted in the usual way in the same field, were extensively deteriorated. I was led by this statement, to try the experiment on a small scale in my own garden last season. I planted not quite half a peck, only fifty sets, in six ranks, cutting a piece out of each and putting a pea firmly in. The pea grew up and flourished well, and when I dug the potatoes, they were perfectly free from taint or speck of disease, and very fine and large, while in the same bed close to them was another lot, planted in the old style, nearly half of which were rotten. I leave your readers to draw their own conclusions.—*Letter in the Agricultural Gazette.*

The above hardly seems reasonable, and yet it may be true and important. It is easily tried.—Ed.

HORSE SHOE AND SOLE TILE.

We were highly gratified by a recent visit at the Tile Works of Messrs. C. & W. McCammon, Albany. These gentlemen are manufacturing both the horse shoe and the sole tile. The clay of their quarry appears to be well adapted to the purpose; and we judge that they are thorough in the most important matter of burning. It should be understood that not the very hardest burn makes the best tile. On the other hand, the soft, yellowish tiles, hardly approaching to a red, which we sometimes see laid down, are little to be relied upon. A medium burn is what is wanted; and that, with most clays, (not all,) and with the Albany especially, is indicated by a color approaching a cherry red, and by a sharp ring. We noticed that the Messrs. McCammon's tile, for the most part, had the right color and the right ring; and that when any had failed to get just that burn, which gives strength and durability, they had selected them out, to be burnt over, or otherwise disposed of. This is of great importance to the farmer, as it would be wretched policy to spoil a long line of drain by laying down an imperfect joint or two. The horse shoe tile is a fraction cheaper than the sole, but the sole tile will give the best satisfaction. The prices of the Messrs. McCammon's sole tile are, we perceive, $12 per thousand pieces, 13 inches in length, for the 2 inch; $18 for the 3 inch; $40 for the 4 inch, and $60 for the 5 inch. For nearly all drains, except the mains, and where a line is quite long, the 2 inch is ample. Draining has become important, and will become increasingly so to the farmer. It is well known to our readers that we have never for a moment given in to the notion that all lands require draining; and yet no one goes before us in our es-

timate of its importance to lands that are cold and wet for the want of it. The sole tile is, in our opinion, the best and the most economical yet used. They should be laid three and a half feet deep at least. This will pay better than a less depth. Neither the frost nor the grass roots, insinuating themselves into the joints, will be likely to render them ineffective at that depth. At a less depth they may become inoperative from either of these causes. Look out, when you buy tile drain, for the cherry color and the sharp ring; and if you should ever be tempted to lay down those that are imperfect, lay them together, and not mix the half burnt or over burnt with those that are burnt just right.—Ed.

SPENT BARK.

Messrs. Editors: — Tanner's spent bark is slow of decomposition, and partly on this account it is generally neglected as a manure. The best way of employing it is in the form of compost with lime and virgin earth, or with liquid or solid farm-yard manure, by which its decay is accelerated and speedily effected. Some tanners burn their spent bark and apply the ashes to their lands, but even in its undecomposed state it is exceedingly useful, and beneficial in a far greater degree than is thought, by operating in a mechanical way, communicating friability to a cold and stubborn soil; and on a proper mixture, it will often be found of more real value than a like quantity of what might be termed manure; so that, during its slow decomposition in the soil, it is rendering a great amount of good service to the crop planted therein, the soil being rendered more light and tractable in its nature. A friend in Chester Co., Pa., on coming into possession of an estate by purchase, where, many years ago, there had been a tan-yard, found a deposit of spent bark of an immense size, that had never yet been decomposed, and having always been considered a nuisance. Of this he carted some loads to the hog-sties from time to time, keeping them well bedded with it, and removing it when fully saturated with the excrements of the hogs, adding it to the general compost heap, where fermentation and decomposition immediately commenced, and was carried on until the whole contents of the heap had become an uniform mass of the finest and richest compost.—*Boston Cultivator.*

The principle for composting coarse matters for manures is admirably stated above. It is precisely with undecayed leaves and with recently dug swamp muck as with spent tan bark. These substances are inert. There is no fermentation, no action; they are at a stand still. To put them in the soil in this condition is of little or no use, and may be positively injurious. But mix them with an alkali—lime is the cheapest and best for the purpose, and though not called an alkali, is alkaline to a considerable degree—and they come into action; fermentation commences, and the process of decay goes on; and they are rapidly brought into a condition to become food for plants; or if mixed with the excrements of animals, a similar effect is produced.—Ed.

SOOT FOR MANURE.

Soot is always wasted in the country, because it is not generally known that it is a most valuable fertilizer. It is worth as much as guano, and a good deal more than ashes. It should be swept from farm house chimneys every Spring, and it may be profitably sown lightly upon the grass plat, or saved until the early vines and cabbages begin to grow, when it will serve a double purpose if scattered over the hills where the plants are beginning to grow, for it will fertilize them, and give the bugs a distaste—they don't like soot. It is also good for grape-vines. In pulling down an old chimney the mortar should be saved with great care. It is more valuable than barn-yard manure, load for load, particularly if there is much soot mixed with it. Farmers will please remember that soot is good for all crops. It is particularly valuable for mixing in water, about a peck to a hogshead to water the garden. Try it.

Horticultural.

CALENDAR FOR JULY.

FLOWERS.

Roses.—If some of the buds of the hybrid perpetual roses are now cut off, and not allowed to bloom, the autumnal flowering will be more abundant and stronger. Where roses are in request in the fall, some sacrifices of bloom at this season can be made, as the summer blooming garden roses are now in perfection. Roses may be budded this month.

Pinks may now be increased by pipings, and also by layers, and *Carnations* also.

Tulips that are of fine sorts should be taken up as soon as their leaves turn yellow and wither, and after lying a few days to dry, the roots should be put away in drawers in a dry, cool room till the planting season in November.

German Asters may be planted out from the seed beds where they are to bloom, and they are well adapted to take the place of the earliest annuals that are now gone out of bloom.

Chrysanthemums should be watered liberally, and from the end of this month they may have manure water twice a week until in flower.

Annuals late sown, and now coming forward for bloom, may be removed to fill up any vacant places in flower beds.

Autumn Bulbs coming forward must be kept clear from weeds, and the earth should be hoed lightly around them in dry, hot weather, to keep it open.

Greenhouse Plants that are out of doors require daily attention in watering. Care should be taken to guard the sides of pots from the direct rays of the sun. This may be done by placing moss, hay, or litter of any description, between the pots, or by plunging them in saw-dust or ashes. Those Greenhouse plants that have not yet been repotted this year, should now be attended to.

KITCHEN GARDEN.

Cabbage of the larger kinds should be planted for the winter crops.

Celery also should now be planted in quantity from the seed beds.

Some *Turnips* may be sown also, but the end of the month will be time enough.

Peet may still be sown for winter use.

Peas sown towards the end of the month will generally succeed well.

Endive should be sown, for a full crop, early in the month.

Spinach.—Sow for autumn, and keep it well hoed.

Attend to the hoeing and general tillage of all growing crops, keeping down weeds, and hoeing *deeply*, especially in hot weather. All ground that has become vacant from the early crops should be immediately dug up and replanted or sown. For this purpose cabbage and turnips are always useful. But at present peas, celery, sweet corn, endive, beet, pepper plants, and many other things may also be used for succession crops.

Onions may still be sown to grow for sets for next years' planting.

Tomatoes may likewise be planted for late use.

Cucumbers for pickling may be sown in the open ground.

The invariable rule should be to keep growing crops well tilled and free from weeds at all times.

TIME FOR PRUNING ORCHARDS.

In lowery weather, during haying or harvest, or perhaps a little after harvest, is a good time to prune the apple orchard. The sap is then thick, and will

not flow from the injured part to the damage of the tree; and the wounds will heal and become barked over sooner than at any other time.

Let no suckers be growing from the roots, to take from the growth of the tree, unless possibly a few on the south side, to keep the sun from the trunk, in very sunny exposures; and we hardly think that even that is wise.

It is well to form the head of the tree with reference to the shading of the trunk. In our climate the sun should not have unbroken access to the south side of the trunk from 10 A. M. to 2 or 3 P. M., as the bark is liable to be burned.

In pruning an apple tree, look ahead, anticipate the effect of future growth, and where you see that limbs will be too much crowded when grown, cut them away while small.

The cutting of many small branches is less injurious to a tree than the cutting of a single one when grown large.

Strive, therefore, by a wise foresight, to avoid the necessity of cutting large limbs.—Ed.

ROSE BUGS.

The following was from the pen of the lamented T. W. Harris. Our lady readers, as well as the horticulturist, will find its descriptions and directions at once interesting and useful. It was one of the last productions of that distinguished entomologist. We cut it from a back number of the *Boston Cultivator*.

Messrs. Editors:—In compliance with your wishes, I propose to give you some information upon the economy of the rose bug, as an answer to sundry inquiries of one of your correspondents.

In this latitude, rose bugs usually begin to appear during the second week in June, or at the time of the blossoming of the damask rose. Their numbers increase successively for ten days or more, and their visitation lasts from 30 to 40 days, although each individual continues but about three weeks. At the end of this time, the females, often accompanied by the males, go into the ground for the purpose of laying their eggs, burrowing to the depth of from two to three or four inches, according to the nature of the soil. Each female lays about thirty eggs, of a globular form and white color, and one-thirtieth of an inch in diameter. Many of the rose bugs die in the ground, but others return to the surface, linger a few days, and then perish. Great numbers are devoured by birds, bats, moles, mice, skunks and toads; and the rest die a natural death as soon as their season for pairing and laying is over. The eggs begin to hatch in twenty days after being deposited in the ground, and produce little whitish six-legged grubs, which live upon the roots of grass and of other plants. They attain their full size in the autumn, being then nearly three-quarters of an inch long and about one-eighth of an inch thick. Upon the approach of cold weather, they descend below the reach of frost, and pass the winter in an inactive state. In the spring they return towards the surface, cast their skins, and take the crysalis form, in which they bear resemblance to the parent insect, but are of a whitish color, and are unable to move from place to place. During the month of June, the crysalis skin is thrown off, and the included insect, now transformed to a full-grown rose bug or beetle, digs its way out of the earth, and is soon ready to take flight and to appear with its fellows upon the leaves of the trees and shrubs that are suited to its taste. Thus the various changes, from the egg to the perfected beetle, are completed within a single year.

The annual visitations of the rose bugs are not limited to any definite number of years. Like many other destructive insects, they go on increasing in numbers for several successive years, and then cease almost entirely to be seen for an indefinite period of time. In this town, they were very abundant during several years previous to 1850, when they seemed to have vanished almost entirely, and very few of them have been seen here since that time.

Gathering the insects by hand, and throwing them into a tin pail containing a little water to prevent their flying out, till they can be burnt in the fire or killed with *boiling* water, has hitherto proved the best remedy. They are particularly fond of the blossoms of some kinds of *Spiræa*, such as the *ulmaria*, and

others which are cultivated as ornamental shrubs, and oftentimes they collect on them in such numbers that a handful may be taken at a single grasp. In the cool of the morning and evening, when they rarely fly if disturbed, they may be dislodged from trees by suddenly jarring or beating the limbs, and can be caught and gathered in sheets spread beneath.

THE SEXES OF STRAWBERRIES.

Ed. Farmers' Magazine:—I beg leave to call your attention to the erroneous opinion generally entertained in regard to the sexual distinctions of the strawberry blossoms. This is an opportune time to examine and analyze them, to determine the question, as they are now fully developed. Much has been published by various writers on fruit culture, that has had the effect to confuse and mislead the public mind on this subject, by misrepresenting the facts in the case, by stating that some of the blossoms of the strawberry, or some of those of its many varieties, are destitute of the stamens or male organs, and are therefore, imperfect and must be barren, unless the pistils or female organs be fertilized by the pollen of the male organs of some of the other blossoms. These they term, *pistillates*. Others, being supposed to be destitute of pistils, they call *staminates*. Whilst other plants or varieties, having both the stamens and the pistils, and being fertile in themselves, they term *perfect*. Other doctrines of a similar character, have also been advanced, but as they are equally as fabulous, it is unnecessary to recite them.

It is quite evident, however, that such erroneous views must have been acquired upon a crude and very superficial inspection of the flowers, and not from their botanical analysis.

After a careful examination of many of the varieties of this plant, it is easy to perceive, how superficial observers have been deceived by the great difference there is in the relative lengths of the male and the female organs of the blossoms; for in some of them, the former are considerably longer than the latter, and very perceptible; whilst in others, they are very short and hardly to be distinguished from the latter, except by a separation of the green calyx from the forming berry, as hereinafter directed. But, notwithstanding their deficiency in length, they are, nevertheless, equally, as genuine and efficient as the long stamens, and will be found, to be proportional in size to the pistils, and to the other constituent parts of the same flower, and to have also, what are indispensable, namely their anthers as fully developed as are the stigmas of the other sex. They are therefore effective for the purpose of fertilizing, as it may be proved, that such may be found in all places, producing an abundance of berries of a very large size, at distances remote from where there are any other plants. Accordingly, these latter varieties designated by their having naturally short stamens, have been erroneously deemed imperfect, and doubtless are those which they term *pistillates*.

Besides those who entertain the hypothesis of there being separate male and female blossoms,—there are also, others who widely differ from them in believing that both the sexual organs are in each flower, but that the males are not fully developed, and so dwarfish in length as to be incapable of producing fertility. Hence, when such bear fruit, as they generally do abundantly if properly cultivated, it is most inconsistently alleged that they must have been fertilized by the males of other flowers growing not only several feet, but many rods off, instead of by their own organs which were in immediate contact and for which there is the most natural appetency. The absurdity of such theories, is of itself sufficient for their refutation.

Now, it is immaterial, how or where these distinctions and opinions originated, or by whom they have been promulgated, certain it is, that they are repug

nant to the principles of the science of Botany, and to the laws of nature that control the reproduction of vegetable growth, and have no foundation in fact. For the following reasons:

In Botany, the strawberry belongs to the class in the artificial system of Linnæus, that is founded upon the circumstance of the *number* and *position* of the stamens, and is called ICOSANDRIA: it includes those plants only, which bear *perfect* flowers, and have *more than* 10 *stamens always growing upon the calyx.* The male organs, therefore, are never wanting in the blossoms of this plant, as it is generally alleged and believed, but always to be found growing upon the calyx in every one of them, as well as they are in those of the raspberry, blackberry, apple, pear, peach, plum, cherry, &c., all of which belong to this same class, and have alike perfect flowers, and are as amenable to the charge of having sexual distinctions of their flowers and undeveloped organs as the former; but, I am not aware, that any such has ever been seen.

On the contrary, if the male organs be wanting, and the calyx without any of them inserted upon it, and there be *staminate* and *pistillate* varieties of this plant, then it does not properly belong to this class with the raspberry, &c., but in violation of that immutable law of nature, according to which no plant of one class, or order, or genus, can be changed or intermixed with any one of another, it would thereby be required to change both its relations and class, and have to be arranged with the hop, hemp, poplar, willow, ailanthus, &c., in the class DIŒCIA, which properly includes all those plants that bear the imperfect blossoms with staminate and pistillate flowers on separate plants.

These facts can be easily proved, and the question determined while the plants are yet in full bloom, by a botanical analysis of some of the blossoms of each variety which may be found in almost every garden, and the public mind no longer kept unsettled by vague assertions, and by opinions unsupported by well authenticated examinations. The operation is very simple, and might be learned by almost any person, in less than 30 minutes, from some work on botany. It consists merely in detaching the green calyx which is 10 or 12 cleft, and surrounds the white petals of the corol, and the base of the flower, (and afterwards of the ripe berry), from the receptacle or young berry that is in the center, when about 20 male organs, with fully developed anthers, can be distinctly seen inserted upon the inside of the base of the calyx, and the female organs upon the nearly-formed berry.

Hence, it must be obvious, that from the natural relations and classification of this plant, it can have no such sexual distinction as that founded upon any of the blossoms being without the male organs; nor can any such be artificially produced by the culture of the seedling, nor by the means employed in producing hybrids or mules, or the cross-breeds by the intermixture of species and varieties.

As erroneous opinions lead to erroneous practice, it is therefore highly important that the opinion on this subject should be correct, in order to induce those who have hitherto falsely attributed the failure of their plants to bear fruit, to this circumstance, to further investigate and find out the true cause of it, which is very generally in all those cases, owing to a faulty mode of culture and management that should be corrected as soon as possible, and a proper system adopted. JOHN B. MCMUNN, M. D.

Port Jervis, N.Y., June 14, 1858.

We confess ourselves to have been in the error expressed by Dr. McMunn, if it be one. But we are willing that he should be heard, and would be willing that the other side should be defended, if it can be, in our next. Will some of our wise horticulturists come out, and either own up or defend themselves?

We will add, that Dr. McMunn brought us this article but one day too late for our June number, desirous that it should appear at the very time when strawberries are in the blossom, that all might, the better judge of his views, by actual observation, which must certainly be looked upon as very fair.—Ed.

TO PREVENT BUGS ON VINES.

Plant beans among your cucumber vines, and others, and let them grow among them till the vines get strong enough to resist the bugs, then pull up the bean plants, and throw them away. This has been tried and found effective.

TRAINING OF APPLE TREES.

The Committee on Fruit, at the late Exhibition of the Mechanics' Institute, in their report, give the following directions for training apple trees, and though we have often recommended the same plan, sustained by the experience of practical men, the subject is of sufficient importance to bear reiterating:

"Wherever the plan of heading down the young trees, so that they shall throw out a section of branches near the ground, has prevailed, success in raising apples has been the result. By forcing out branches near the ground, a constant shade is given to the trunk of the tree, and the earth around it is kept cool and moist. This enables the sap to ascend and descend freely, at all times, to all parts of the tree. Again, by heading in the side branches, the buds nearest the trunk, which otherwise would remain dormant, are forced into fruit spurs, and the terminal bud and those nearest it throw out a subdivision of shoots, which, with their rosettes of leaves, (the germs of fruit spurs to be fully developed the next season) afford a shade for the interior of the tree, which gradually becomes a mass of fruit, inside, instead of presenting an open straggling head of naked canes having apples only on the ends of the twigs, liable to be whipped off by the winds and blistered by the sun. Other advantages, such as greater facility of getting the fruit and pruning the trees, are in favor of low training. Your committee have frequently been pained to witness the persistence with which some cultivators continue to offer to purchasers high-grown trees, without urging upon them the necessity of heading them down on planting. The result of this highly censurable conduct is, that there are found all over the State orchards where the trees have trunks from three to six feet high, without a branch. Examine every such tree, and it will be seen that the bark is tight and dry, and the trunk in most cases dead on the side next to the sun. Every such cultivated tree is worthless, and will soon perish."—*Cal. Farmer.*

Miscellaneous.

OUR PEDESTRIAN CORRESPONDENT.

NO. II.

'Twas a bright pleasant morning when Albert and myself were paddled across the swift running Desmoines from Croton, Iowa, to Athens, Missouri. We did not feel any peculiar sensation at setting foot for the first time upon a new State, nor did we see anything to apprehend from border ruffianism, so marched up into the town, which was, however, soon surveyed. From a high bluff near by we had a commanding view of the town and also the country for some miles around. There is a dam in the river here, built by the river improvement company, part of which however is broken away and adds much to the wildness of the raging water that goes foaming over it, quite reminding one of the great cataract. A large flour-mill had just been erected here, which was well appreciated by the surrounding farmers, as shown by the long row of teams waiting to have their grists ground. We took the main road leading directly out into the country, and after crossing the bluffs were suddenly ushered on to the prairie, where a beautiful sight met our

eyes. For many miles around the beautiful rolling prairie, dotted here and there with buildings, and lined off by fences which divided one plowman from another, and kept them both from coming in contact with the traveler on the roads. A neat brick building meets our view here, a handsome frame there. It was in vain we looked for the log hut of the pioneer, nor did we find one inhabited by anything but the brutes of the field till after many miles walk. The farmers we met on the road had good teams and all spoke pleasantly to us, except one who had a barrel of whisky in his wagon, so we conclude he was ashamed of it, and kept his head down in consequence. We soon came on to the main State road leading from the Mississippi river to the western side of the State, and along which we have a fine range of handsome farms and good substantial, as well as convenient-looking farm houses, that would bear a comparison with almost any farm district in the Eastern States. One feature we noticed, which was, that orchards are scarce, and the few we saw were quite young. This is a subject, and I may add an invaluable luxury which has been almost entirely neglected west of the Mississippi river till within the last few years. Apples have been brought here from the adjoining country on the east side of the river, and sold cheap enough to justify the farmers in buying them, and to cause them to neglect them. A sense of "goneness" in the inner man warned us of approach of the dinner time, and seeing a comfortable-looking old fashioned country house a short distance from the road side, we ventured up, and were met at the door by one of those old patriarchial looking fathers with an ingenuous countenance, and a great deal of it, who greeted us kindly, and upon being informed of our mission, pointed to a house a short distance ahead saying it was a public house and the landlord would oblige us with anything we wanted, at the same time apologizing for doing so by stating the indisposition of his wife, who was the only female occupant of the house. We had heard conflicting stories of the hospitality of the Missourians, and were still in doubt, after the result of this, our first attempt to get a practical proof.

The next house however proved to be a house of entertainment, and a good one too, for the landlady got us up a dinner of ham, eggs, sausage, fritters, etc., etc., etc., seldom surpassed, and provoked from us a comparison with the tables of the unrivalled Thompson of Broadway, New-York. We did ample justice to it at the tune of twenty-five cents each, and after ascertaining that the fine farms we were passing through could be bought (many of them) for fifteen dollars per acre, and the best of them for twenty five, started on our journey saying why don't the young men of the Eastern States who are laboring over the barren sand plains or digging around innumerable, immovable rocks, at the tune of one to two hundred dollars per acre, come out here and settle on these fertile prairies at the nominal sum for which they can be bought? We will leave them to answer for themselves while we jump a board of this old farmer's wagon, who, with his son, is on his way from Davis County, Iowa, to Alexandria on the Mississippi to buy a stock of goods. Says he is tired of farming and is going to open a store. One would imagine from appearances that his whole fit-out, including wearing appearel, and pocket-money, might be bought for the gold on a Broadway merchant's cane-head. But unlike the Broadway merchant, his gold is in the shape of corn, and in his pocket, ready to cancel his obligations without even three days' grace. He is a generous-hearted man with a silver head, and informs us he is from old Kentucky, and one of those unfortunate ones who never had no father nor no mother nor no bringin' up. His early associations are

connected with the town of Quincy, Illinois, which at that time was quite small, and he informs us that he could have had what is now the most valuable property there for the little money he saved while acting as a boy in the store, but preferred investing in lands farther west. How many such mistakes are made for a want of a knowledge of the future.

We asked why he did not go to Keokuk to buy his goods? to which he replied, "that place had grown to be so large with so many railroads and steamboats coming into it, he feared his horses would get frightened or something would happen him; he did not like these large cities." Alas! mighty Keokuk, thought we.

We bade our old friend goodbye, and struck off the road a short distance to to the town of Waterloo. The first object that met our attention, was the saw and grist mill, which was then doing a very good business in both branches. The proprietor however wished to sell it to us with one hundred and sixty acres of land for the small sum of nine thousand dollars. We told him we would consider the matter, and walked on in the town where we found a hotel with a name on the sign dear to the memory of every United States citizen—*Pierce*. We went in, found Mr. Pierce a gentleman, got supper, staid all night, took breakfast paid our bill and left. But this was not all that occurred in Waterloo. We had been in the place but a short time before the hotel was filled with the town's people, who, boastingly informed us they were border ruffians, some "*bornd* on the sod and others *nearly so*." We looked at them, told them we were Yankees in search of curiosities, and that they were the first specimens of that stock we had seen, which of course made us prize the sight very much. They told us that any Yankee would sell his soul for a sixpence; wanted to know if we were d——n black Republicans; what our views were regarding niggers, etc., etc. We thought at one time the tar and feathers were not far off. Soon after however we challenged them to a game of checkers, when the skill of the town was set before us, and upon being beaten retired. So you see we had a jolly time in Waterloo, which, by the way, sits in a little valley entirely surrounded by high hills, We visited the prison and saw there a man who was imprisoned for picking the judge's pocket while on trial for some other offence. We thought he would soon do for a French detective. 'Twas a bright morning as we ascended the hill, passed through the country, examined some of the monuments, took a last view of that town, made a few notes, and commenced to look for something else, which soon appeared in the shape of a nigger, barefooted, with a woman's skirt on, and a gentleman's coat and hat. We stopped to look at the animal after passing, and wondered whether it was man or woman; it however pursued a heedless course, and we were soon left alone. Soon after we came to a comfortable looking house, and fine large barn, which we recognized to be after the pure Pennsylvania model, and determined upon going in to have a chat. We were right in our Keystone conjectures; found everything nice and comfortable within, took a good glass of fresh water; the last of which we had just swallowed when the baby, that sweetest of musical instruments, sat up a tune in the next room. Ma excused herself as little darling was sick; no others being in the house. We excused ourselves and proceeded about a quarter of a mile farther, when we came to a nice old-fashioned house tastefully painted, fancy fence in front also tastefully painted, large yard beautifully laid out, paved walks, great variety of handsome flowers and shrubbery, all neatly trimmed and fitted up. Every thing around displayed a taste which reminded us of the little comforts, conveniences and beauties of home. It looked as though the occupant had an eye

comfort and pleasure as well as dollars and cents. There was a nice large garden adjoining, with a variety of useful things in it, and an old lady was in the back yard cleaning an old pole, (don't know what for,) so we ventured in and introduced ourselves, whereupon she invited us into a very handsomely furnished parlor, took off her old gloves and bonnet and gave us a very interesting account of herself and family, the changes in the country, etc., during the fifteen years they had been there. She had lived in Maryland, Virginia, and Kentucky, but liked the farm they were on now better than any of the previous ones; said they could raise anything they wanted, and very good crops too; but even at that their farm can be bought at twenty-five dollars per acre.

She told us when they came out here they passed over the ground where Keokuk now is, staying there one night, and though they were solicited to purchase, refused even at the nominal sum it could have been bought at then. She also gave us some thrilling personal reminiscences of the daring villainy of the Mormons while in the hight of their glory in this section. She invited us to play on the dulcimer; was sorry that her daughter who used the instrument was not in. Not liking to wait too long for the daughter to come home, we journeyed on, passing many beautiful places, especially through what was called the Pennsylvania settlement. We were surprised to see knockers and bells at the doors, and more agreeably surprised to find that some of the belles were within doors. We halted at a very handsome place and on ringing the bell were met at the door by a very fine-looking middle-aged man who politely informed us he did not keep a public house; but as there was no one near, invited us in and gave us an excellent dinner with grace before it. He had a very handsome wife and the handsomest lot of little children I ever saw. His mother-in-law entertained us in the most lady-like manner. They were originally from Kentucky, but had been in this country for some time. Has a large farm, the best of which he asked fifty dollars per acre for, which by the way is the price *asked* for much of the land in that section Mississippi valley. When we left this place, Albert with a significant look remarked that, he thought that gentleman lived at home and boarded at his own table. After crossing a barren ridge of land running through there called the sand ridge, we soon struck the bank of the Desmoines, which we crossed and put once more into old Keokuk, to prepare for another tramp in some other direction; till when we remain yours, etc.,

BOOTS AT THE BOTTOM.

THE PIRATES OF SAUGUS.

AN ORIGINAL TALE OF 1658,

FOUNDED ON FACT.

[Entered according to Act of Congress, in the year 1852, by J. A. Nash, in the Clerk's office of the District Court of the United States, for the Southern District of New-York.]

THERE is a peculiar tendency in the human mind to palliate crimes of magnitude, that involve in their accomplishment so large a proportion of hazard and danger as to call forth the exhibition of great physical exertion and dogged courage.

This can only have arisen from that irrational confusion of ideas, which has led the world too frequently to confound the manly attribute of moral courage, which enables the Christian to persevere in that which he deems the path of duty regardless of personal dangers and perils, with that debased pursuit of present animal gratification, heedless of consequence, that has been found to be the usual result of the overthrow of all sense of moral obligation. The courage in the two cases is remembered; the inducements that called it forth are forgotten; and when, in one of the two, that punishment, merited by the selfish crimes that led to its exhibition, is dealt

out by the hand of retributive justice, a maudlin sensibility seeks to find palliation for deeds that, but for the false heroism by which they are surrounded in their perpetration, would fail to find a single voice raised in their excuse.

Such is the view that has sometimes been taken of *Pirates*. Whilst the whole world has, by common consent, scouted their *crimes* as of the most hideous enormity, the *names* of those whose fearful catalogue of cruelties have rescued them from the oblivion which should have buried them in forgetfulness, are spoken of in terms conveying too often a tacit, if not an expressed admiration, for their courage and fearless recklessness. A tribute little merited by men who, it should be remembered, in the perpetration of their lawless deeds, had always before their eyes the prospect of death in one shape or the other. For they well knew that their numerous crimes had forfeited their lives to every part of civilized humanity.

It may, however, admit of question, whether, in some instances, the formation of the piratical character may not, with more force than will be at first supposed, be imputed to some extent to the habits and customs of those communities from whence they spring. Who that is acquainted with the early history of the conquest of Peru, or even the treatment of the Indian races by the early settlers in North America, can doubt that familiarity with the cruelties inflicted by Europeans upon the natives, must have debased and weakened the sense of moral responsibility in the minds of many amongst them. Thence cupidity, lust and ambition found the steps easy to descend, and but few in number, that led them on to the condition that raised their "hands against every man, and the hand of every man against them!" Alas! where blood forms no part of crime, it is ever found in civilized life that the downward path from virtue to vice is so devious, and strewed with so many specious incitements, that the false step of the one who first enters it, is deemed the justification of the next one who follows!

Two hundred years ago, when the newly-settled state of the country and the constantly recurring disputes with the red man made the situation of the white settlers one of constant alarm, that gave rise to unremitted watchfulness, a small craft was seen, a little after sunset, to anchor near the mouth of the Saugus River, in Massachusetts Bay. A boat was soon observed to move up the river for some distance and there land four men on the shore, who immediately ran into the neighboring forest and were lost sight of.

This was observed by a few only of the settlers, but in the evening the news was conveyed from house to house, and divers discussions were held as to the probable objects of the visitors. In the morning the eyes of the inhabitants were directed seaward, but the vessel was gone, and the boat also; and conjecture was at a loss to form any probable opinion on the subject.

An iron mine had been discovered upon the west bank of the Saugus River some twenty years before the occurrence of the events alluded to above. This mine had been brought into man's subjection, and works established, which were now in full operation.

On the morning following the appearance of the strange sail, a paper was discovered at the iron foundry, upon the men arriving there to their daily occupation, stating that if a specified quantity of shackles, handcuffs, hatchets, and some other articles of iron manufacture were made and placed in the adjoining woods, at a place designated, the full value in silver would be deposited in the same place in exchange for them. These articles were in a few days made, and deposited accordingly, and on the following morning they were gone, and a sum of money was found in fulfillment

of the written engagement. Although a strict watch had been kept, no vessel had been observed to approach the coast.

Nothing was seen or heard of the men or of the vessel for many months. At length, on a fine afternoon in March, a vessel was seen to be making sail before a fresh breeze, to which she appeared to have spread every inch of canvas that she could muster; and as she leaped from wave to wave, her slender topmasts quivered before the gale. In a few minutes a king's ship was seen advancing in full chase upon her, and notwithstanding the evident reckless regard of nautical prudence by which the course of the craft first observed was pressed onward, it was apparent at a glance, that every minute the cruiser was gaining upon her prey, and it was evident that the stranger was a *pirate*. As soon as she was within range, the cruiser saluted her adversary with a long shot, of which the latter took no other notice than to alter slightly her course, spreading, at the same time, still more canvas, in her vain attempt to escape. Perceiving at length that escape was hopeless, the pirate hove to, and delivered a well-directed broadside to her pursuer as the cruiser ran alongside. The shot took effect, but was not heavy enough to injure seriously the larger vessel, which now returned the compliment, and the action became sharp and animated. It had not lasted long when, it being clear to the crew of the pirate that she must be taken, (for it was only from serious damage being done by their early fire that escape could be hoped for,) the bond of brotherhood of the pirate crew, (if such frail ties deserve the name,) was severed, instead of being drawn closer by the common danger. Four of the pirates, determined to provide for their own safety, lowered stealthily from the stern of their craft a boat that was placed there purposely to afford ready means of escape in any sudden danger that their uncertain calling presented, and in which was constantly kept a barrel of biscuit, and a keg of powder, with small arms, and a lug sail. In the turmoil of the fight, and under cover of the shades of night, which was now drawing on, the men succeeded in running up the river, and concealing themselves and their boat in the forest; leaving their comrades to the mercy of their assailants, who soon boarded and mastered the little craft, and dealt out to its barbarous and inhuman crew that retribution which their numerous known and unknown crimes so richly merited; for it appeared that the pirates had long eluded the vigilance of the cruisers, whose duty it was to exterminate them.

The four men who escaped were pursued by a party detached from the cruiser, who scoured the forest, during several days, for many miles around, but without effect. No trace of them could be discovered, and the attempt to take them was therefore given up; and it was presumed that they had scuttled and sunk the boat the night they escaped, in order to conceal the knowledge of the place at which they landed.

For some few years from this time, depredations of various kinds were committed both at sea and on land for many miles around. Fishing boats, handled by one or two poor fishermen only, were occasionally found adrift, and their owners never more heard of. Farm-yards were robbed, and although the authors of these atrocities were never discovered, the popular belief was that the four pirates were the guilty men.

At length a daughter of one of the foundry men, in rambling through the woods of Saugus, lost her way; and after vainly endeavoring to retrace her steps, she hurried onward, half frightened, and heedless of her course, until she found herself in a gloomy valley, enclosed between steep hills and precipitous rocks on either side; shut out from the more open glades of the sur-

rounding forest by the deep shade of pines, hemlocks and cedars, whose dense foliage and thickly-clustered branches, interlaced closely together, obscured the valley from the light of day, except at one small spot at its remote extremity. Here, to her astonishment, she saw a rudely-built hut, in front of which was a neatly-cultivated garden, and by the side a well, which, together with the hut that adjoined it, was shaded and draperied by the branches of a native vine, that stretched its wide arms in wild luxuriance over the huge limbs of some neighboring trees.

From the rural character of this retreat, poor Charlotte Ransom (whose youthful innocence knew no guile,) imagined that some poor woodman's family had here taken up their abode, and she rejoiced in her heart at the thought that she would now be able to obtain guidance for her wandering steps. She therefore knocked at the door of the hut, which stood half opened, and her summons was speedily answered by a man, whose rough and stern aspect startled her. In a tremulous voice she in a few words explained the object of her visit, upon which the countenance of the man assumed a more gentle mien, and he asked her to walk in and rest, saying he would afterwards show her a short path by which she might regain her home.

Without possessing that regularity of features which is essential to the ideal of female beauty, Charlotte was handsome, with a figure tall and attractive. Her profile was perfect; whilst her piercing eye and jet black hair, parted smoothly over her temples on either side, set off to advantage the contour of a face and head molded in lines of grace, that a Raphael might long to model, but which his art would in vain attempt to copy.

Joyous and soft as was the smile that played around her chastely-chiseled lips in social discourse, when aroused, the knitted brow, with raven's feather penciled, gave force and substance to the eagle glance that flashed from her eye; and showed that *firmness* owned a solid throne within, that nerved her purposes with giant strength.

Her preceptive powers were vivid, and her judgment sound; and taken altogether, she was a girl calculated to inspire feelings of permanent regard and affection, rather than the unmeaning homage of transient admiration.

About thirty years had passed over the head of Thomas Veal, the pirate, for such he was at the time of the visit paid by Charlotte at the hut. He was well made, and before his entrance upon the rough life that he had adopted for the last six years, his countenance was pleasing and his manner bland. The brutalities in which he had of late taken part, and the hardships inseparable from a pirate's life, had given austerity to his features, but the heart of flesh had not yet been completely ossified within him. Qualms of conscience would ever and anon flash across his unwilling mind, and for the moment he would wish himself once more an honest man.

The unusual sight, now for so long to him, of woman decked in the bloom of youth and innocence, recalled with vivid force his early days of social enjoyment; and with the memory came the fervent wish that once again they might return.

Gazing at his pretty visitor, the resolution was inwardly made that he would quit his present life, and that *she* should be the means by which, and for which, it should be done.

The fact was that the suspicions of the neighborhood had been correct. Buried in the seclusion of the Pirate's Den, (for such has ever since been the name of the place,) Veal and his three companions had been the perpetrators of all the supposed, and of many more, depredations that had been charged upon them. Issuing from this secure retreat, from the top of the high, craggy steeps,

behind which they could command a view of the country for miles around, as well as the Bay to seaward, they were enabled to avoid, in their marauding adventures, all chance of contact with the population; and it was their rule always to leave one of their party at home, to keep guard and watch, in order to be sure that their retreat had not been discovered in their absence.

At the time Charlotte accidentally wandered into the valley, the other three pirates were out upon an expedition some miles distant, and Veal knew that they would not return until night had set in, to lend them the veil of darkness.

Upon her entrance, Veal hastened to remove out of sight some evidences of a questionable mode of life, that happened to lie scattered around, and sought to engage Charlotte in conversation, telling her that he was a brother of a woodcutter who lived there, to whom he was then paying a visit, having himself recently arrived home from a distant voyage.

His conversational powers were by no means despicable; and, intermingling his discourse with remarks and allusions to his speedily starting to show her on her way, he sought to improve the opportunity that chance had afforded him to ingratiate himself in her good opinion. After passing an hour in this way, upon Charlotte's expressing a wish to renew her journey, Veal at once assented, and they started together on the way. Advanced some distance up the hill-side, Veal told his companion that in a few moments they would have to pass over natural steeps in the mountain, so precipitous that he feared she would become dizzy and unable to keep her footing; and he therefore urged her to allow him to blindfold her whilst they crossed them, assuring her there was no danger provided she did not loose her presence of mind, and that, taking his arm, he would in five minutes have conducted her in safety. She timidly consented, not, however, without some misgivings; and after the lapse of a short time, but longer, nevertheless, than she expected, she found herself at the foot of an enormous precipice, which, whilst blindfolded, she had descended.

They walked gaily on, Charlotte's confidence being now confirmed in the good faith of her guide, and their conversation became more animated. She began to take an interest in her new acquaintance, whose assiduous and delicate attentions to her showed that he was solicitous to make the most of the short time he had yet to be with her. He told her that in a few days he should leave his brother's woodland hut and return home; and he urged his suit so earnestly and so successfully that, before they parted, he obtained permission to pay her a visit at her father's house.

Relying on the precaution he had taken to prevent her observation of the way by which he had conducted her from the glen, Veal judged rightly that she was not likely to retain any distinct memory of the way in which she had reached it. Nevertheless, under the guise of the assurance that her charms had made a lasting impression on his heart, he requested her to observe silence at home on the subject of her day's adventure, saying that he would find means to get an introduction to her family, and so approach her in a way that would not be likely to meet with opposition from her relations.

The purpose that Veal had formed was one which, to be successful, it was necessary should be concealed from his companions, by whom he knew it would be treated not only with ridicule and contempt, but moreover that its disclosure would bring down upon himself certain destruction. For, formed in the school in which their characters had been, he was aware that they would never allow an old comrade of their own attempt to return alone to the paths of virtue and honesty.

In answer to the inquiries as to the cause of her lengthened absence, Charlotte told her friends that she had lost her way, but that, from inquiries at a woodcutter's cottage, she regained her path. Rojoiced at her return, her friends cared or thought little of her story For, had they done so, they well knew that there were no woodcutters resident in the surrounding forest.

One of Veal's present associates, named Harris, had originally come from the neighboring village, which he had quitted to join a king's ship, from which he subsequently ran away; and his intimate acquaintance with the country had contributed mainly to the success of many of their adventures. Veal now determined to turn this circumstance to account in his contemplated courtship, and availing himself of the temporary absence of his companions, he rubbed off as much as he could of the roughness of exterior appearance, which his late habits had engendered, and dressing himself in his best sailor's wardrobe, that had long laid unneeded in his sea-chest, he started off to introduce himself to the family of his lady-love.

Charlotte chanced to be at the door when he arrived, and his altered dress had so much changed his appearance as to prevent her at first recognizing her woodland lover. On his near approach she caught his features, and her beaming eyes lighted up with evident satisfaction at the visit. Veal, however, placing his finger on his lip to signify his desire that she should not acknowledge her acquaintance with him, passed by her into the house, where her father and mother were sitting. To them he introduced himself as a friend of Harris, who he represented to have left some months previously on board a ship in the Mediterranean, and from whom he purported to bring tidings to his relatives. By this means Veal soon engratiated himself in the good opinion of the family, and through them, he was speedily at home in the village.

He stayed as a visitor for two days, during which he took an opportunity to attack the citadel in Charlotte's heart with an ardor that could not fail to produce an effect.

Veal had been brought up to the trade of a shoemaker, and he now sought to impress his new friends with the idea that he intended to settle down amongst them, and renew his old occupation, as soon as he had arranged some affairs connected with an interest he pretended to have in the ship in which he had recently arrived, and which, he represented, would necessarily engage his attention for some weeks; promising, however, in the meantime, to avail himself of every practical opportunity to repeat his visits to the village, in which a few hours, with his heart-stirring tales of his adventures, had been sufficient to make him a welcome visitor to more individuals than Charlotte Ransom.

These promises, when the absence of his associates were likely to be sufficiently prolonged for the purpose, Veal did not fail to fulfil; and matters had thus gone on for some weeks, when a cruiser came into the river again, with the object of renewing the search for the pirates.

[TO BE CONTINUED.]

HISTORY IN WORDS.

THE history of words is the history of trade and commerce. Our very apparel is a dictionary. We are told of the "bayonet," that it was first made in Bayonne; "cambrics," that they came from Cambray; "damask," from Damascus; "arras," from the city of the same name; "cordwine," or "cordoven," from Cordova; "currants," from Corinth; the "guinea," that it was originally coined of gold brought from the African coast so called; "camlet," that it was woven, at least in part, of camel's hair. Such has been the manufacturing progress, that we now and then send calicoes and muslins to India and the East, and yet the words give standing witness that we once imported these from thence; for "calico" is from Calcut, and "muslin" is from Monsul, a city in Asiatic Turkey.

DESTRUCTIVE WAR ENGINE.

We mentioned some time since that two of our ingenious citizens, Messrs. Wright and Gould, completed the model of a rotary cannon which could be fired at the rate of sixty rounds per minute. Since that announcement the inventors have been engaged in having constructed a working model of the gun, which is now finished, and was tested yesterday afternoon in a vacant building on Washington street. The piece is a beautiful little brass gun of the usual shape, mounted on wheels, and so constructed that, a rotary cylinder constitutes the breech, which contains four charges, and is replenished by means of a hopper, and fired as rapidly as a man can work an ordinary lever backward and forward. The machine is discharged by electricity, and from this results an important and valuable discovery, which was developed after the completion of the piece.

By means of the battery and wires connecting with the cylinder by which ignition is caused, the cylinder becomes perfectly electrized which keeps it as cool as if continually bathed with ice. Some two hundred rounds were fired yesterday in rapid succession at the rate of thirty rounds per minute, at the end of which time, without using the swab once, the breech was much colder than when the firing commenced. The rapidity of the firing was much retarded by the bad quality of the cartridge in use, but such as it was it was sufficient to demonstrate the complete success of the invention. We understand that as soon as all arrangments are completed the inventors will proceed to Washington and lay their plans before the Government.—*Buffalo Express, 22d ult.*

THE SHOE BUSINESS IN LYNN.

We have the pleasure to annouce the thorough, and, we trust, permanent revival of the shoe business of Lynn. The increase of business in this important branch of industry has been greater, since the reaction took place, than the most sanguine anticipated. All hands are employed at nearly the old prices of labor, and on certain styles, a sufficient number of good workmen can not be obtained.

There is, however, among some manufacturers a feeling that the present state of things is too good to last, and that there is danger of a reaction; but this is hardly possible when we consider the small amount of shoes on hand, and the fact that there is but a short time left to prepare for the fall and winter demand. We regard the present state of things as an indication of the return of a legitimate trade, and a restoration of business which, if not too greatly forced—caution is never more needed than in good times—will give a sure reward to the industrious and enterprising manufacturers, and increase the comforts, wealth and population of Lynn.—*Lynn Bay State.*

LOVE FOR THE DEAD.

The love that survives tomb, says Irving, is one of the noblest attributes of the soul. It has its woes, it has likewise its delights; and when the overwhelming burst of grief is calmed into the gentle tear of recollection, then the sudden anguish and convulsed agony is over, the present ruins of those we most loved are softened away into pensive meditation on all that it was in the day of its loveliness. Who would root sorrow from the heart, though it may sometimes throw a passing cloud over the bright hour of gaiety, or spread a deep sadness over the hour of gloom? Yet who would exchange it even for the song of pleasure or the burst of revelry? No, there is a voice from the tomb sweeter than song; there is a remembrance of the dead to which we turn even from the charm of the living.

LOVE THY NEIGHBOR AS THYSELF.

One of the tax collectors of California, says that he found a Norwegian in El Dorado county, who made oath that his sole earthly taxable effects were a church and a school house. This singular individual is a poor miner, and has built the above mentioned establishments with his own hands without aid from any one. His church is free for the use of any sect of religionists, except Mormons and Universalists. He has a mining claim which he has worked for five years; and whenever his digging will average more than two dollars a day he will go out into the highway, and coax some poor fellow to share the profits of his labors.

☞ "Mr President," said a member of a school committee, "I rise to get up, and am not backward to come forward

in the cause of edication. Had it not been for edication, I might have been as ignorant as yourself, Mr. President."

THE THUNDER STORM.

By John McChesney.

Hark! the distant thunder rolling,
See the clouds in wild array,
God—the elements controlling—
Now his power doth display.

See the vivid lightning flashing!
And the winds are rushing free;
Now the rain in torrents dashing,
As the whirlwind bends the tree.

Overhead, all dark and lowering,
Hangs the mighty thunder cloud;
'Pon the earth, in masses showering,
All the weight it doth enshroud.

Power above! thou art mysterious,
In the lightnings of the storm—
Thou dost reign in might imperious;
Let us all thy praise prolong.

Shield us when the lightning dashes,
With our nature's prone to sin;
In our spirit's lightning flashes,
We would all thy mercy win.

And to thee the praise ascending,
Thee, the mighty God above;
As we thus in praise are bending—
Shield us, Father, with thy love.

LIVES OF THE PILGRIM FATHERS.

The Rev. Thomas Hooker was born in Liecestershire, England, 1586, and was educated in Cambridge University in England. He was an ordained clergyman of the Church of England. He first preached in London, and afterwards at Chelmsford, Essex county, and with very great success. He was one of the Puritan clergymen in England, who was silenced by Bishop Laud for non-conformity to the rituals of the Established Church, and soon became a victim of imprisoument and persecution. The statute of Elizabeth, passed by the British Parliament in the thirty-third year of her reign, compelled all persons to attend the Church of England every Sunday under a penalty of £20 per month, and the person who should fail to attend church during the whole year, was declared guilty of felony. This law was evidently passed against the Catholics, but it was applied with full force to the Puritans also. They a good deal avoided it by going into the church just as the services ended; but to counteract this state of things, the Nonconformists ordained preachers, who were to preach on Sunday evenings and on week days, and also teachers, who were to attend public meetings and officiate in the absence of a regular clergyman. Mr. Hooker was ordained a preacher, while the Rev. Samuel Stone, who had been educated at the same University of Cambridge with Mr. Hooker, was ordained teacher, and preached in Essex and Norfolk, England. Mr. Stone was born in Hertfordshire in 1602. Both of these gentlemen were driven from England by civil authority, for nonconformity to the Church of England, and came to Cambridge, Mass., about the year 1631 or 2, where they both entered with spirit and zeal into the project of planting new colonies in America.

Mr. Hooker and Mr. Stone, started with a colony of 100 persons, for Hartford on the Connecticut river, then a howling wilderness, and in 1636 came across the country with these 100 persons from Cambridge to Hartford, and planted the colony there. They traveled with no guide but their compass, no cover but the heavens, no habitation or lodgings but upon the ground in the open air.

They came to this howling wilderness, which was to be opened, planted, cultivated, and turned into gardens and fields; they had to plant their crops the first season and harvest them; they had but few oxen or instruments of husbandry; they were in a country where the Indians were hostile and cruel, and had murdered many persons who had settled among them or traded with them previously. These planters had not been accustomed to fell the forest, or clear and cultivate new land; nor had they experience in the growth of crops; nor were they acquainted with the kinds of grain

which would be most congenial to the soil.

Fortifications had to be erected in the shape of block-houses and forts, to protect them from the wily assaults of their enemies the Indians, who were the warlike tribes of the Pequods. There was no safety except in a constant watch being kept, and a constant preparation to repel the assaults of the enemy. Roads had to be made, that on an emergency the inhabitants might fly immediately to each other's relief. Their houses had to be erected and fortified for their personal safety, while the climate was cold and severe in the winter. Sheds and barns had to be erected and fortified for the feeding and covering of their cattle.

The first year that cattle were brought to Connecticut river great numbers died for want of food and shelter. They were in a wilderness; the people were few in number; they were compassed with numerous fierce and savage tribes of Indians, and their clothing was scanty; but during the second season they obtained good crops, which was of great assistance to them. Here were a handful of people, with families of wives and little children crying for bread; and in addition to this they were now called upon to form and shape society by wise and wholesome laws, and to ordain a constitution and form of government, which should contain the principles of justice, equality and permanency, with a new principle of representation extended to all its citizens. In addition to this, money must be raised to establish schools, to pay for religious instructions, to organize societies, parishes, towns, counties and colonies, and an equal system of legislation. Bridges were to be built, churches erected, roads opened, and yet every thing from the beginning in the shape of clothing, mechanical and agricultural implements, had to be brought from a great distance, and procured at a dear rate. Military trainings, and accoutrements, and ammunition, and supplies were to be procured and established. Every human being in the colony was in danger, when lying down at night, when rising up in the morning, when going out to cultivate the land, and when coming in for rest.

Laws were to be made, magistrates chosen and clothed with authority, and indeed every thing had to be prepared anew for civil, military and religious institutions. To carry much provisions or furniture through the wilderness was impracticable; these had to be manufactured in the rudest way possible for the occasion. Mills were to be erected, or mortars burned out, to pound their corn and grain with. All these things were encountered by the early colonists who came across the country and first settled in the interior of New-England; every man, woman and youth must practice agriculture; some few only could be found capable for mechanical trades; the hasty pudding and pumpkins, the pea porridge, the boiled potatoes, the venison, the bear, or the racoon, furnished much of the meat for their meals. The milk and butter from their cows composed much of their food, and the only articles of delicacy were the salmon and shad, found in Connecticut river and other large streams. Tea, coffee, sugar, rice, raisins, fruits, and other delicacies were almost unknown.

Happy was the man who could find one window filled with glass for his log cabin; while the only door in the dwelling turned and creaked on wooden hinges. The skins of wild beasts dried and tanned in a rude way, furnished no little part of the clothing of the laborer, and his bed at night was the leaves of the trees compressed in sacks, or scattered loosely around the floor, with a deer skin, a bear skin, or a dry cow-hide for his quilt and covering.—The climate was new to them; the inhabitants were unaccustomed to its severities; diseases in new types and forms appeared; the healing art was almost

unknown, and the remedies for sickness were yet wanting, or imperfectly found out. Some of the choicest spirits from the old world came to the wilderness, who had lived in the mother country in affluence and delicacy, strangers to fatigue and danger, and were amongst the first Pilgrims.

Along Connecticut river among those who undertook the great work of first settling and planting the colony were Messrs. Hooker, Stone, Haines, Ludlow, Webster, Warren, Wells, Hopkins, Willis, Whiting, Woolcut, Phelps, Swaine, Tateot, Mitchell, Steele, Mason, Ward, Deming, and a great many others, who were both civil and religious fathers in the colony, who devoted their lives, their talents, and their estates for the foundation of civil and religious liberty in the new world.

Look now ye children of the Pilgrims upon the settlements in New-England and see how much and what your fathers and mothers have done for you, and what a mighty inheritance they have left you, and thrown into your laps which you now hold without money and without price.

Soon after settlements began in Connecticut the Pequod Indians began a systematic warfare of murdering, scalping, and burning houses, torturing prisoners to exterminate the whites from the country. This went on for many years, until the whites were driven to make a confederation to protect themselves and to destroy their adversaries.

The most formidable enemy at that time was a nation of Indians settled along the Sound at the mouths of the rivers, whose head-quarters were twelve miles east of Connecticut river. They were a fierce and warlike people, treacherous and false, never observing faith or treaties with the whites. Many of the people passing up and down the river, were killed by them. Those who fell into their hands were tortured, their flesh first slashed with knives, then filled with burning embers, and finally roasted to death with a slow fire.

Many people in the colonies of Massachusetts and Plymouth had been murdered. At Hartford a company was formed, which increased to 90 men in Wethersfield and Saybrook, under the command of Captain Underhill, Captain Mason, and Captain Clapp. Captain Mason, with his little army, arrived at Droten, at a place called "Porter's Rocks," on the 25th day of May, 1637, after sleeping on the ground during the night they rallied at daylight and marched into the woods two or three miles to the Indian fort, attacked it, and destroyed 6700 of these Indians.

Mr. Samuel Stone accompanied this expedition; he went down the river from Hartford as the priest and counselor of this expedition, and spent, as has been said, the whole night in prayer to his God, and wrestled for the prosperity of the expedition.

This dispersed the Indians about the mouth of the Connecticut river and along the Sound, and the people through Connecticut and Rhode Island and Plymouth colonies enjoyed comparative peace till King Philip's war, when all the Indians seemed to have rallied and united to exterminate the colonists.

Mr. Hooker died at Hartford, in 1647, aged 61 years. Such was his great efforts in establishing the colony and churches in Connecticut, that he was styled the "Light of the Western Churches," by Mr. Cotton, who wrote the early history of the Pilgrims.

Mr. Stone was a learned theologian, a great reasoner, ingenious and didactic, remarkable for his exact Sabbaths, and for fasting and self-denial,—a man of stern principles with great mental endowments. He lived and died at Hartford. He was the clergyman who succeeded Mr. Hooker, or rather, the two were fellow-laborers. Both Messrs. Hooker and Stone left families, some of whose descendants have ever been amongst the

most eminent and respectable people in New-England. Mr. Stone died July 20th, 1663, aged 61 years. He was called "New-England's glory and a radiant crown." He raised a family of five children, and notwithstanding his great piety, wisdom and energy, in his latter days Satan came among his household, and his son, his only son, was a shameful drunkard, and after his father's death, put in charge of a committee for his safety and protection.

THE SON OF A PILGRIM.

POWER OF MIND.

IT is mind, after all, that does the work of the world; so that the more there is of mind, the more work there is accomplished. A man, in proportion as he is intelligent, makes a given force accomplish a greater task—makes skill take the place of muscles—and with less labor, gives a better product. If all the mechanical labor in England was performed by hand, it would require every full grown man in the world.

WHAT A GORMAND!

M. ALEXIS SOYER, a French professor of the gastronomic art, calculates that a man in an average lifetime, eats about the following, or their equivalent;—

30 oxen, 200 sheep, 100 calves, 200 lambs, 50 pigs; in poultry, 1,200 fowls, 300 turkeys, 150 geese, 400 ducklings, 263 pigeons; 1,400 partridges, pheasants and grouse, 600 woodcock and snipe, 600 wild pigeons and teal; 450 plovers, ruffs, and reeves; 800 quails, ortolan and dotterills, and a few guillemots and other foreign birds; also 500 hares and rabbits, 40 deer, 120 guinea fowls, 10 peacocks, and 360 wild fowls. In the way of fish, 120 turbot, 140 salmon, 120 cod, 260 trout, 400 mackerel, 300 whiting, 800 soles and slips, 400 flounders, 400 red mullet, 200 eels, 150 haddock, 400 herrings, and 5000 smelts; and some hundred thousands of those delicious silvery whitebait, besides a few hundred species of fresh water fishes. In shellfish, 20 turtle, 30,000 oysters, 1,500 lobsters or crabs, 300,000 prawns, shrimps, sardines, and anchovies.

☞ THE man who carries a lantern in a dark night can have friends all around him, walking safely by the help of its rays, and not be defrauded. So he who has the God-given light of hope in his breast, can help on many others in this world's darkness, not to his own loss, but to their precious gain.

OVER THE RIVER.

OVER the river they beckon to me,
Loved ones who've crossed to the other side;
The gleam of their snowy robes I see,
But their voices are drowned by the rushing tide.
There's one with ringlets of sunny gold,
And eyes the reflection of heaven's own blue;
He crossed in the twilight gray and cold,
And the pale mist hid him from mortal view.
We saw not the angels that met him there,
The gate of the city we could not see;
Over the river, over the river,
My brother stands waiting to welcome me.

Over the river the boatman pale
Carried another—the household pet—
Her brown curls waved in the gentle gale;
Darling Minnie! I see her yet.
She crossed on her bosom her dimpled hands,
And fearlessly entered the phantom bark,
We watched it glide from the silver sands,
And all our sunshine grew strangely dark.
We know she is safe on the further side,
Where all the ransomed and angels be;
Over the river, the mystic river,
My childhood's idol is waiting for me.

For none return from those quiet shores,
Who cross with the boatman cold and pale;
We hear the dip of the golden oars,
And catch a glimpse of the snowy sail;
And lo! they have passed from our yearning hearts
They cross the stream and are gone for aye.
We may not sunder the vail apart,
That hides from our vision the gates of day.
We only know that their barks no more
Sail with us o'er life's stormy sea:
Yet somewhere, I know, on the unseen shore,
They watch, and beckon, and wait for me.

And I sit and think when the sunset's gold
Is flushing river, and hill, and shore,
I shall one day stand by the waters cold,
And list to the sound of the boatman's oar;
I shall watch for a gleam of the flapping sail;
I shall hear the boat as it gains the strand;
I shall pass from sight with the boatman pale,
To the better shore of the spirit land;
I shall know the loved who have gone before,
And joyfully sweet will the meeting be,
When over the river, the peaceful river,
The angel of death shall carry me.

ONE'S MOTHER.

AROUND the idea of one's mother, the mind clings with fond affection. It is the first dear thought stamped upon our infant hearts, when soft and capable of

receiving most profound impressions, and all the after feelings are more or less light in comparison. Our passions and our willfulness may lead us from the object of our filial love; we may become wild, headstrong, and angry, at her counsels or opinion; but when death has stilled her monitory voice, and nothing but calm memory remains to recapitulate her good deeds, affection, like a flower beaten to the ground, by a rude storm, raises her head and smiles through her tears. Around the idea, as we have said, the mind clings with fond affection; and even when the earlier period of our loss forces memory to be silent, fancy takes the remembrance, and twines the image of our departed parent with a garland of graces, and beauties, and virtues, which we doubt not that she possessed.

BENEFIT OF BEING OUT OF DOORS.

New-York ladies promenade much in the Fifth Avenue, Broadway, Bowery, and so along down, according to quality; and it seems to do them good, for they have grown into majestic proportions of late, greater this summer than ever before. How Europe could ever have manufactured so many goods as they wear, or how this country could ever have bought them, unless on tick, is more than we know. If our country women would practice being out more, they would become as solid, if not as large.

Medicus.

LIFE.

We are one vast moving body, subject to trials and privations of all kinds. Some follow one business and some another. We all must do something to occupy our minds to a certain extent, or else time will hang heavily on our hands. The carpenter, (for instance) must go round and find some person who wants a building built, or else, he must go without work and idle away his time at the store, or tavern, and ten chances to one he will form some bad habit that will cling to him for life. Just so with the farmer, he must till the soil, or else he will become shiftless, and his family come to want. How much better it would be if every one would spend his leisure hours in gaining useful knowledge. Every village or town should have a library of Historical and Agricultural books, for the benefit of the public; almost every village might raise funds for such a library. It would tend to keep young men at home evenings, where if there was no such thing as a library they would be lounging about from early in the morning until late at night. Farmers, Mechanics, and Merchants, think of this, and have a library of useful books; no matter if you have only a few volumes at first, you can at some future time add more to them. A Reader.

LETTER OF A DYING WIFE TO HER HUSBAND.

The following touching fragment of a letter from a dying wife to her husband, was found by him some months after her death, between leaves of a religious volume, which he was very fond of perusing. The letter was written long before her husband was aware that the grasp of fatal disease had fastened upon the lovely form of his wife, who died at the early age of nineteen:

When this shall reach your eye, Dear George, some day when you are turning over the relics of the past, I shall have passed away forever, and the cold white stone will be keeping its lonely watch over the lips you have so often pressed, and the sod will be growing green that shall hide forever from your sight the dust of one who has often nestled close to your warm heart. For many long and sleepless nights, when all besides my thoughts were at rest, I have wrestled with the consciousness of approaching death, until at last it has formed itself upon my mind; and although to you and to others it might seem the nervous imagining of a girl, yet, dear George, it is so. Many weary hours have I passed to reconcile myself to leave you, whom I love so well, and this bright world of sunshine and beauty; and hard indeed it is to struggle on silently and alone with sure conviction that I am about to leave all forever, and go down into the dark valley. "But I know in whom I have believed," and leaning on his arm, "I fear no evil."

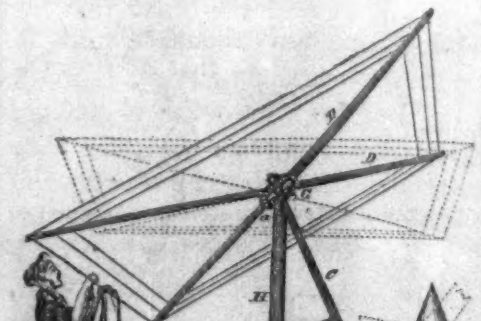
Do not blame me for keeping even all this from you. How could I subject you of all others, to such a sorrow as I feel at parting, when time will soon make it apparent to you? I could have wished to have lived if only to be at your side when your time shall come, and pillowing my head upon your breast, wipe the death damps from your brow, and usher your departing spirit into the Maker's presence, embalmed in woman's holiest prayer. But it is not to be—and I submit. Yours is the privilege of watching, through long and dreary nights for the spirit's final flight and of transferring my sinking head from your breast to my Savior's bosom. And you shall share my last thought, and the last faint pressure of the hand, and the last feeble kiss shall be yours, and even when flesh and heart shall have failed to me, my eyes shall rest on yours until glazed by death; and our spirits shall hold one last communion, until gently fading from my view,—the last of earth,—you shall mingle with the first bright glimpses of the unfading glories of the better world, where partings are unknown. Well do I know the spot, my dear George, where you will lay me; often we stood by the place, as we watched the mellow sun set, as it glanced in quivering flashes through the leaves, and burnished the grassy mounds around us with the stripes of burnished gold, each, perhaps, has thought that some day one of us would come alone, and whichever it might be your name would be on the stone. But we loved the spot, and I know you will love it none the less when you see the same quiet sunlight linger and play among the grass that grows over your Mary's grave. I know that you will go there, and my spirit will be with you then, and whisper among the waving branches, "I am not lost, but gone before."

INDIVIDUALITY IN DEATH.

Men may live in a crowd, but they must die alone. Friends and ministers can only accompany us to the entrance of the pass. None of them can speak from experience and tell us what it is to die. And it is a way we have not gone ourselves heretofore. But the Christian *hero*, though alone, is not alone. "Yea," says David, "though I walk through the valley of the shadow of death I will fear no evil, for thou art with me; thy rod and thy staff they comfort me."

MORRILL'S IMPROVED CLOTHES DRIER.

The engravings below represent an improved clothes drier, for which letters patent were granted to Samuel Morril, of Andover, N. H., the 11th of November, 1856. The invention consists in so hanging the reel to a stationary post that it may be tipped down, as represented, to a convenient position for hanging on the clothes, thrown back into the position shown in dotted lines, to raise the clothes out of the way. The rail, *D D*, is hung for this purpose upon an axle, *C*, and this axle hung upon a pin at the top of the post, *H*, in such a manner that it may be turned so as to lower one side of the frame, *D*.



The axle or arm, *C*, upon which the reel is hung is operated and fastened by the arm, *E*, which is hinged to it at the end. There are notches in its under side to catch upon an oblique staple in the side of the post, and hold the parts in position.

It is obvious that after the clothes are put upon one side of the reel it is necessary to turn that side up, out of the way, and by that means bring a fresh side of the frame into position for putting on the clothes. It is also obvious that without some means to prevent, the side thus loaded would immediately return to the lowest position. To obviate this difficulty a ratchet wheel, *G*, is attached to the under side of the reel, and a ratchet (not seen) attached to the posts, *H*, prevents its return.

After the clothes are put on, the reel is swung up into a horizontal position by drawing back and dropping the end of the handle, *E*. This invention renders the operation of hanging out clothes easy and comfortable, as the operator avoids the necessity of high reaching, and yet the clothes may be very easily raised into a good position to dry, out of the way, and where they will not be soiled by being run against by persons or animals passing under the reel.

Further information may be obtained of C. A. Durgin, 335 Broadway, New-York. See advertisement.

SMALL FRUITS.

In order to the highest success in the cultivation of small fruits, so healthful and grateful to the family, it is necessary that attention be given to them. Currant bushes should be kept well pruned, the old and decayed wood, and that infested with the borer should be cut out, and the plants fed so that new strong wood may be encouraged, and then heavy crops of good fruit will be secured for the table, for jellies, for syrups and for wine.

For the cultivation of the raspberry, both the white and the red, it is necessary, as they are found, to remove those plants that produce canes which grow imperfect fruit, or but a scanty crop. Such plants are found occasionally, and observation needs to be directed to them. The English Fillbasket variety appears like two berries conjoined and are much admired.

☞ In setting cabbage and other plants, it is well, in order to prevent their wilting, and to insure a rapid growth, to dip the roots in a thin paste of clayey loam, made about the consistency of thick molasses. Then give the plants a good watering, and they are sure to thrive. The best manure for cabbages to prevent club footing, is green cattle dung.

MARRIAGES OF COUSINS.

Dr. L. M. Bemis, of Kentucky, made a report on this subject to the last national Medical Association at Washington, which contains startling facts. He has ascertained that there are more than 6000 pairs of married cousins in the United States, and these marriages have produced 1100 deaf and dumb children, 650 blind children, 1850 idiotic children, and 300 insane children. Of the remainder, although there are some brilliant exceptions, the great majority are imperfect in mind or body, or both. These are facts, and should have their due weight in deterring young people from marriages that will probably lead to such deplorable results.

HOW TO RUIN A SON.

1. Let him have his own way.
2. Allow him the free use of money.
3. Suffer him to rove where he pleases on the Sabbath.
4. Give him free access to wicked companions.
5. Call him to no accounts for his evenings.
6. Furnish him with no stated employment.

Pursue either of these ways, and you will experience a most marvelous deliverance, or you will have to mourn over a debased and ruined child! Thousands have realized the sad result, and have gone mourning to the grave.

HOW TO TELL A DRUNKEN MAN.

If you wish to ascertain whether a man is really in liquor, put the word "municipality" in his mouth. If he can shell that out, pronounce it plain and distinct, he is sober enough to deliver a temperance lecture, take our word for it. The words "National Intelligence" are even harder to get over, and may be given to any one where the least suspicion is entertained that he is "how came you so."

KEEP YOUR EYE ON YOUR NEIGHBORS.

Take care of them. Don't let them stir without watching. They may do something wrong if you do. To be sure, you never knew them to do anything very bad, but it may be on your account they have not. Perhaps if it had not been for your kind care, they might have disgraced themselves and their families a long time ago. Therefore, don't relax any effort to keep them where they ought to be; never mind your business, that will take care of itself. There is a man passing along—he is looking over the fence—be suspicious of him, perhaps he contemplates stealing something one of these dark nights; there's no knowing what fancies he may

have got into his head. If you see any symptoms of one passing out of the path of duty, tell every one else that you can see, and be particular to see a great many. It is a good way to circulate such things, and though it may not benefit yourself, or any one else particularly, it will be something important about some one else. Do keep something going—silence is a dreadful thing; though it is said there was silence in heaven for the space of half an hour; don't let any such thing occur on earth, it would be too much like heaven for the inhabitants of this mundane sphere. If, after all your watchful care, you can't see anything out of the way in any one, you may be sure it is not because they have not done anything bad; perhaps, in an unguarded moment, you may have lost sight of them—throw out hints that they are no better than they should be, that you should not wonder if people found out what they were after a while, and then they may not carry their heads so high. Keep it agoing, and somebody will take the hint and begin to help you after a while; then there will be music, and everything will work to a charm.—*Exchange.*

☞ Flowers are bright resplendent stars in the green firmanent of earth. They are the joyous adorning of a finished creation. The great hand that framed the universe has made the lovely flowers, and made them, too, for our pleasure, profit and instruction. What heart is so callous as not to dearly cherish the lovely flowers? They have a language that is full of poetry and music, life and pleasure, and refined enjoyment. Who does not love the flowers?

"Flowers, beautiful flowers,
How sweet in this dim world of ours!"

THE TOOTHACHE.

"My dear friend," said H——, "I can cure your toothache in ten minutes."

"How? how?" I inquired. "Do it in pity."

"Instantly," said he. "Have you any alum?"

"Yes."

"Bring it, with some common salt."

They were produced. My friend pulverized them, and mixed them in equal quantities, then wet a small piece of cotton, causing the mixed powder to adhere, and placed it in my hollow tooth.

"There," said he, "if that does not cure you, I will forfeit my head. You may tell this to every one, and publish it everywhere. The remedy is infallible."

It was as he predicted. On the introduction of the mixed alum and salt, I experienced a sensation of coldness, which gradually subsided, and with it the alum and salt. It cured the torments of the toothache.—*Ex.*

THE USE OF BIRDS.

It appears that larks eat up the seeds of tares, thistles, and several other noxious plants. Larks also destroy innumerable larva of the cecedomia, that produce the wheat fly. The robins eat the curculio, that destructive pest to the plum crop. Nocturnal birds destroy rats and mice. It ought to be the pride and pleasure of any one interested in the cultivation of the soil to protect the birds, so beautiful, so sweet to sing, so useful.

HUMAN EXCREMENTS.

Ingenhauiz affirms, that the ejections from an individual will manure as much ground as would produce more vegetables than he could consume; and by selling the superfluous portion, he might purchase enough of other food to make the vegetables palatable.

GROWING HYACINTHS IN MOSS.

A writer in the *Cottage Gardener* says:

"I select the darkest glasses, and, instead of filling them with water, fill them with moss. I keep on adding a little water to prevent the moss getting dry. The bulb retains its position, and blooms as well as when grown in the best soils." — *Germantown Telegraph.*

REMEDY FOR THE STRIPED JUNE BUG.

It is found that this troublesome tribe to the squash and cucumber plants may be easily fenced out by putting over the hills close frames, from six to eight inches high, either with or without their gauze or other thin cloth covering. Our neighbor of the *Farmer* makes these frames or boxes of floor oil cloth, and

approves of them. Some gardeners spread over the plants a thick sheet of cotton batting. Others depend upon watchfulness, and the game of thumb and finger directly to the bugs; and yet others rely upon abundance of plants, and letting the bugs have a share of this world's products.

THE VIOLET.

This sweet little flower is an universal favorite. The odorata and its varieties are more valued, but they can not be had in perfection unless a great deal of genius is bestowed on them. Slugs are very destructive to the violet, devouring the flower as much before they are in bloom as after. Where the flowers are much in request—when grown near cities—beds are made on purpose for them, composed of a layer of coal-ashes on the bottom, covered with a compost of peat-earth, loam, decayed dressing from the stable, and sand, ten inches thick. On this, young runners are to be planted, six inches apart, and carefully attended to. The sweet-scented violet should not be wanting in any collection of plants, on account of its fragrance and early appearance. A single flower will perfume a large room. The flowers appear in April, and continue for a considerable period of time. There are the single white and the single blue, and the double blue and white varieties. The double sorts are the most desirable, and may be rapidly multiplied by divisions of the plants.—*Yarmouth Register.*

INTOXICATING LIQUORS.

A large number of the ministers of the gospel in England, Ireland and Scotland have united in the declaration that the traffic in intoxicating liquors as drink for man, is the immediate cause of most of the crime and pauperism, and much of the disease and insanity, that afflict the land; that everywhere, and in proportion to its prevalence, it deteriorates the moral character of the people, and is the chief outward obstruction to the progress of the gospel; and these are not its accidental attendants, but its natural fruits; that the benefit, if any, is very small in comparison with the bane; that all schemes of regulation and restriction, however good so far as they go, fall short of the nation's need and the nation's duty, as that, therefore on the obvious principle of destroying the evil which can not be controlled, the wisest course for those who fear God and regard man, is to encourage every legitimate effort for the entire suppression of the trade, by the power of the national will, and through the form of a legislative enactment.

☞ It would be well for every man to bear in mind that the object of writing is that it may be read. Words and figures should not only be written so that the writer may make them out, but so that no one can make any mistake as to what they are made to represent. The above rule if attended to would save a large amount of time in printing-offices as well as elsewhere.

THE CUT WORM.

Last year I had a field of corn much injured by their depredations, and tried this experiment. I obtained a number of pieces of the common elder, about a foot long, and distributed them over the field two or three yards apart in every third row. On examining the elder branches every morning, I found numbers of worms collected under them; in some instances as many as fifteen or twenty; when they were easily destroyed. The elder seemed to have the property of attracting them. As this is a simple remedy, it is worthy a trial.—*Gertown Telegraph.*

GOSSIPING.

If you wish to cultivate a gossiping, meddling, censorious spirit in your children, be sure when they come home from church, a visit, or any other place where you do not accompany them, to question them concerning what everybody said and did; and if you find anything in this to censure, always do it in their hearing. You may rest assured, if you pursue a course of this kind, they will not return to you unladen with intelligence; and rather than it should be uninteresting, they will by degrees learn to embellish, in such a manner as shall not fail to call forth remarks and expressions from you. You will, by this course, render the spirit of curiosity, which is so early visible in children, and which, if rightly directed, may be the instrument of enriching and enlarging their minds—a vehicle of mischief which will serve only to narrow them!

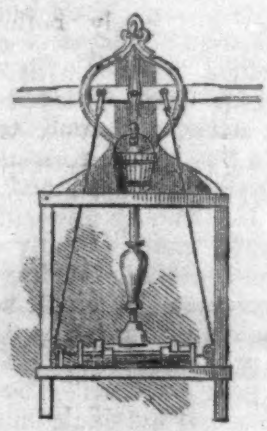
OCCUPATIONS.

Men should be respected, not for their occupation, wealth or station, but for their virtue, intelligence and usefulness. As members of the same community—as citizens and men—whatever may be our occupation, we are all brethren. No useful, honest calling, can detract from the merits of a man. A person should be as much respected and valued in one as in another. In a land of intelligence and equal rights, it betrays a contemptible weakness and want of patriotism to endeavor to establish petty distinctions or *castes* among our citizens, founded on difference of occupations, when every occupation is necessary to our national prosperity and greatness. Isn't the farmer worthy of respect? Let him who contends that he is not, go hungry and manage to live independent of farmers. Isn't the mechanic to be respected? Let him who says he is not, entirely dispense with his service — go without house, clothing, and the conveniences of civilized life, until he can give a better reason for withholding from any useful man his due.

There are various occupations which are necessary to the prosperity of a civilized community. These must all be attended to. There is also an equal diversity of taste and talent. No one has a right to be idle and useless. And every man is fitted for some one of these occupations. Let each select that which best comports with his taste and talents —for which he feels that he is best fitted —in which he can obtain an honest livelihood—let him pursue it with industry and intelligence, and so far he is entitled to our respect—he is a useful member of society, let his calling be what it may. These occupations mutually assist and support each other. We are all interested in the prosperity of agriculture, whether mechanics, merchants, or if in other callings, as well as farmers; and all are interested, farmers as well as others, in the prosperity of the mechanic arts and useful sciences. The prosperity and greatness of the State depends in some degree upon every useful occupation, and each in its appropriate place is useful to all the others. "We are all brethren," "many members, yet but one body,"—not the same members—but all necessary to the symmetry, health and perfection of the whole, and of each other.

Perhaps in one respect the agricultural class may be considered the most important, because the most numerous of any in the community. Whatever tends to elevate the farmers, as a class—to increase *their* profit and *their* enjoyment, to facilitate their operations, and to render the reward of their labors more certain, would have a wider and more beneficial influence than if applied to a class inferior in numbers.—*Maine Farmer.*

☞ If you are disquieted at anything, you should consider with yourself, is the thing of that worth, that for it I should so disturb myself, and lose my peace and tranquility.



We here present a small drawing to our readers of a wonderful pump. It will be seen that it is a double acting, horizontal force pump, working by hand and lever power. The barrel of the pump, three inches in diameter, for ordinary wells, cisterns, &c., is bored 4 inches in each end for the pistons or plungers—and the middle of the barrel immediately under the pipe—is solid, dividing the action of the pistons, so that until the water reaches the pipe—the action of each is independent of the other, though necessarily working at the same time;—as one fills the other discharges alternately. There are cup valves in the end of each piston, by which it is impossible for the water to escape, and under the cap in which the pipe is screwed, there are two half or side valves—which recline and retain the water as it is forced up from each piston, which ends all

the intricacy of the pump save an air chamber, about three feet above the pump, which simply receives and gives regularity to the flow of water at the discharge; as from that to any height within 150 feet, there is no other appliance or fixture whatever except an iron or [illegible] pipe, it will be perceived that the action of the pistons is easy, natural and *direct;* producing the least possible amount of friction, and working, as will be seen, by a square rivet-linked chain, (fastened in each piston) about 6 inches in length, passing over a roller or grooved pulley, which stands at each end, and is secured in the scantling upon which the pump is securely bolted; these chains at the outer ends, hook into iron rods about 12 feet in length, (or any length to suit the desired depth); the tops of these rods pass as may be seen, through the lever—and are secured on top by a screw or thread cut on them and a tap, by which the rods are tightened and regulated so as to give regularity to the action of the pump below. There is a cast heart-shaped piece at the top in which the lever works, and the stroke is regulated so as to prevent the possibility of imparing the pump by carelessness or design.

We have seen the model of the pump, which is simple and beautiful in its construction and operations, and have thus endeavored to give an imperfect sketch of it, as a new and useful invention. It is an improvement, and a *very great one*, upon the "*Lindsey Patent*," of 1855, which worked by balance wheels side gearing, &c., and had a *rotary motion*, the pipe and pump constantly revolving. As to its working powers, we refer our readers to the advertisement of James M. Edney, 147 Chambers street, in this number, who has a model, and will furnish drawings, prices, &c., gratis. The names attached to his certificates are a full guarantee to all that is said of it.

HOE OUT YOUR ROW.

One day a farmer's boy
Was hoeing out the corn,
And moodily had listened long
To hear the dinner horn.
The welcome blast was heard at last,
And down he dropped his hoe;
But the good man shouted in his ear,
"My boy, hoe out your row!"

Altho' a "hard one" was the row,
To use a plowman's phrase,
And the lad, as sailors have it,
Beginning well to "haze"—
"I can," said he, and manfully
He seized again his hoe;
And the good man look'd and smiled to see
The boy hoe out his row.

The lad the text remembered,
And proved the moral well,
That perseverance to the end
At last will nobly tell.
Take courage, man! resolve you can,
And strike a vigorous blow;
In life's great field of varied toil
Always hoe out your row.

SOAP SUDS ON CABBAGES.

I believe it will be a thankless piece of service for one gardener to teach another how to grow cabbages and cauliflowers; yet, as these crops of vegetables often fail in various parts of the country, the following notice may perhaps be useful: Wherever soap suds have been used plentifully, cabbage and cauliflowers have grown luxuriantly. I have made several inquiries of others who have used them, and in no instance have I heard of a failure where soap suds have been applied. I intend to try them over broccoli, to see if they will prevent them from clubbing. Others may do so likewise, and make known the results. Whether the alkali in the water has prevented the enemy from destroying the roots, or given the roots more vigor to resist the attack, I do not know; but one thing is certain, where such matter has been applied, it has produced the most beneficial results. It is a pity to see a pool of filthy water polluting the neighborhood with its stench, while within a few yards of it the vegetables of a garden are dying of starvation.—*Gardener's Chronicle.*

A dandy is a chap who would be a lady if he could; but as he can't, does all he can to show the world he is not a man.

PEABODY'S NEW HAUTBOIS STRAWBERRY.

At a meeting of the Farmers' Club of the American Institute, on Monday, 21st ult., a basket of this splendid fruit was presented to the Club, accompanied by the following letter. We are happy to learn that Mr. Lawton, in addition to his famous blackberry, designs appropriating many acres of his grounds in New-Rochelle to the cultivation of a select number of each variety of the small fruits.

New-Rochelle, June 21, 1850.

Hon. Henry Meigs:

Dear Sir:—I can not have the pleasure of attending a meeting of the Club to-day, but knowing the desire of many of our members to see and taste Mr. Peabody's great strawberry, I beg leave to present you with a specimen. In the Patent Office Report, just published, I find the following statement in regard to it:

"Peabody's New Hautbois. — Mr. Charles A. Peabody, of Columbus, Ga., originated this variety by crossing the Ross Phenix with a wild strawberry of Alabama. It is hermaphrodite in its character, producing fruit without the aid of another plant, and it is in itself an excellent impregnator for pistillate varieties. It is a vigorous grower, and sufficiently hardy to withstand a considerable degree of heat or cold. The plants attain an extraordinary size, sometimes so large that one can not be covered by a half bushel measure. The fruit is borne upon tall runners, on stems from three to four inches long, attached to the calyx by a coval-like neck, without seeds, there being very few seeds in the berry.

"It is of singular form, somewhat irregular, and frequently measures seven inches in circumference. The flesh is firm, melting and juicy, having the most exquisite pine flavor, and requiring, when eaten, little or no sugar. This strawberry is a prolific bearer, opening its blossoms at the South during the mild days of winter, and perfecting its fruits in the spring, as the weather will permit. When ripe, their color is a rich, dark crimson; through its firmness and lack of acidity it will bear transportation better than any other strawberry."

Having confidence in the statements of Mr. Peabody, I ventured to enter pretty largely into the cultivation, and obtained from him ten dozen plants, and planted them on 25th of April, 1857, one dozen on the rich ground of an old hot-bed, after removing a large portion of the manure. Here I obtained a fine stock of plants and a specimen of fruit the first season. The residue were planted in another compartment of common garden soil, *without manure*, and suffered to throw out runners in every direction; these also gave a specimen of fruit the first season, besides supplying a very large number of well-rooted plants, and with these I have extended my plantation to half an acre or more, and I am now preparing an additional acre for the exclusive cultivation of this magnificent variety.

The plants on the hot-bed ground are full of fine fruit, which is growing very large, but not one ripe berry. The specimen accompanying this were gathered this morning from the larger compartment, which was not more than half cleaned out from the runners this spring, and the vines are almost matted together. I have no hesitation in believing that if the plants had had room, and been properly cultivated for the fruit only, that Mr. Peabody's statement as to the *size of the plant and fruit* would have been fully confirmed. As it is, I am satisfied we have now a *perfect plant*, which can be cultivated with as little care as any plant ever introduced into the garden, without the slightest hazard of obtaining a beautiful display of flowers and a bed of barren plants. I

design, however, of testing the qualities of eight or ten of the most approved varieties, and shall not be so prejudiced as to omit to give them a fair trial in competition with this variety.

Very respectfully and truly yours,

WM. LAWTON.

A DRUNKEN DUCHESS'S WATER PARTY.

THE following is a copy of an invitation which Alexander Pope, the poet, received from the Duchess of Kingston. It is addressed to "Alex. Pope, Esq., at Mr. Jervas's house, in Cleveland court." "Sir,—My Lady Duchess being druuk at this present, is not able to write herself, has commanded me to acquaint you that there is to be music on the water (Thames) on Thursday next; therefore desires you to be that evening at her house in Bond street by six o'clock at farthest; and her grace will call on you there to take you to her barge, which she ordered to be ready at that time at Whitehall, with provisions, and shall land you on the wished-for shore. I am, Sir, your most humble servant, G. Daddison. East Acton, Tuesday night."

The original is in the British Museum.

EVERY ONE HAS HIS DUTY.

GOD appoints to every one of his creatures a separate mission, and if they discharge it honorably—if they quit themselves like men, and faithfully follow that light which is in them, withdrawing all cold and quenching influence—there will assuredly come of it such burning as, in its appointed mode and measure, shall shine before men, and of service, constant and holy. Degrees infinite of luster there must always be; but the weakest among us has a gift, however seemingly trivial, which is peculiar to him, and which, worthily used, will be a gift also to his race forever.

SCOURS IN ANIMALS.

A writer in the Maine *Farmer*, recommends for this disease fine pulverized bone. We have never seen it tried, but from the nature of the substances that constitute bone, such as lime to correct too great acidity, and gelatine to smooth the irritated surfaces, it is probable its employment would be useful.

MILDEW ON GOOSEBERRIES.

THE *Farmers' Gazette* (English) states that the mildew is prevented by sprinkling fine salt around the bushes, or where it can be had, by placing seaweed around them. Watering with soap suds, before the fruit forms, and using composts for manure, is also good.

☞ The secret of attachment to home is of easy solution; there is no mystery, nothing but plain common sense about it; it is only for home to be furnished with the means of rendering us happy, and all is done that need be done.

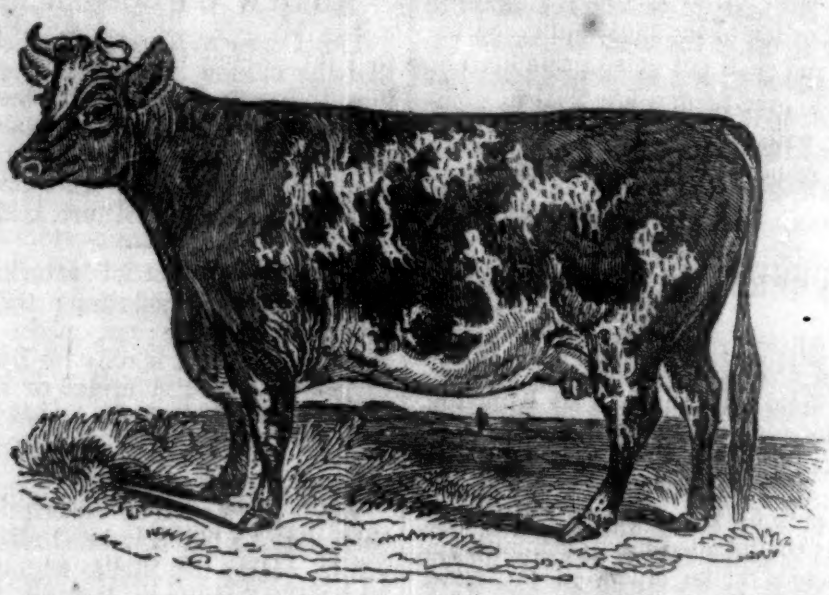
☞ A BEAUTIFUL inscription, it is said, may be found in an Italian graveyard: "Here lies Etella, who transported a large fortune to Heaven, in acts of charity, and has gone tither to enjoy it."

☞ JERROLD says that young boys who marry old maids, "gather in the spring of life the golden fruits of autumn."

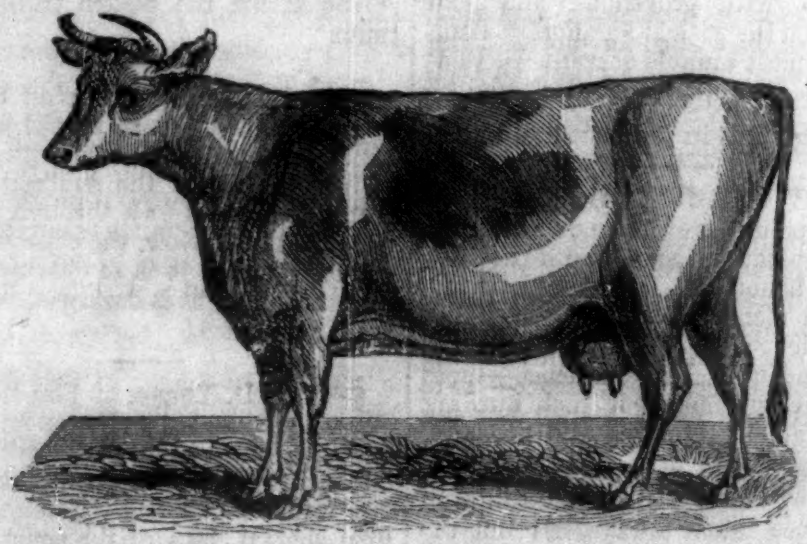
☞ THE cheapest window that ever was fashioned, if it is barred with spiders' webs, and hung over with carcases of insects, so that the sunlight has forgotten to find its way through, of what use can it be? Now, the church is God's window; and if it is so obscured by errors that its light is darkness, how great is that darkness!

☞ A. D. YOUNG, of Flat Rock Precinct, Ky., sued Laben Letton for $10,000 damages, on account of the wife of the latter charging Young's wife with infidelity to her husband. The case occupied several days of the court, and the jury brought in a verdict of $4,000 damages. Another slander case, in which Miss Thompson, a milliner, of Millersburgh, Ky., sued a young gentleman, was, to the disappointment of the crowd, compromised by her receiving $1,000.

☞ A LATE celebrated judge, who stooped very much when walking, had a stone thrown at him one day, which fortunately passed over him without hitting him. Turning to his friend, he remarked, "Had I been an upright judge, that might have caused my death!"



CATTLE FOR THE COUNTRY.—We may be thought to have devoted too much space to this subject. But it is an important one. "It makes a difference" whether $500,000,000 worth of cattle feed annually gives even a small per cent better return for being fed to the right animals.



Whether we are to improve our stock by the importation of fine specimens from abroad, or by breeding more sensibly from our natives, (?) or, what we are more inclined to expect, by carrying on both lines of improvement together, one thing we want to be ever before the American farmer ;—

If it is not convenient for you to pay the tall prices of imported stock, still, by rearing your best calves in the best way, by coupling them properly, and following up this course with their progeny, you can not only *leave* to your heirs, but *have* for yourself, and that very soon—not as a far off, fancy good for somebody, but for yourself in less than ten years—such cows as *that*, and not such as *this*, (though you would not need to be ashamed of either,) and all your stock to match—hardy, plump, good-natured, manageable, easy to keep.

CHILDREN'S CORNER.

JAPAN CEDAR.

The cedar, of which the one represented above, is a variety, is considered by Europeans as one of their noblest evergreens. It is wonderfully long lived. By some it is believed that cedars of Lebanon, that were growing at the time when Solomon built the temple, are still living.

The cedar of Lebanon (cedrus) is a magnificent tree, when grown in open land, where its branches can extend without obstruction. Loudon describes one at the Duke of Northumberland's seat, as 72 feet high, 24 in circumference, extending its branches 117 feet every way, and shading an acre of land or more.

The cedar of India (cedrus Deodora) is also a very splendid tree. This tree thrives in every part of Great Britain, and will probably do well in this country, where it has been recently introduced.

Red cedar (cedrus Juniperus) is indigenous to this country. It seldom exceeds 40 feet in height and 2 feet in diameter. Its heart wood is of a reddish hue, has a fragrant odor, and is extremely durable. For this reason it has

been much used in ship building, for fence posts, and in the construction of railways.

From the few facts about the cedar, we want to draw a pleasant moral for the children to think of. Its long life and the extreme durability of its wood have caused it to be employed as an emblem of the lasting rewards of virtue. In the Old Testament, the truly good are compared to the cedar of Lebanon. As this lives, when other trees die, and lasts beyond life, when they perish, so the good among men generally live longer than the wicked, their memory endears them to survivers longer; and their reward will continue when a thousand generations even of the lasting cedar shall have perished.

Children listen to the instruction of your parents. They have lived longer than you. Consequently they know more. Be willing to be governed by them now, and govern yourselves by their advice by and by, for they will still have more experience of the world than you, and the oldest cedar, even those famous trees in California, 350 feet high, and probably not less than 4,000 years old, will be but a faint emblem of the permanence of your welfare.

BOOK NOTICES, ETC.

STEPS TOWARDS HEAVEN; or, RELIGION IN COMMON LIFE. A Series of Lay Sermons for Converts in the Great Awakening. By S. T. Arthur. New-York: Derby & Jackson, 119 Nassau street. 1858. pp. 403.

If this book, as we judge from a too hasty perusal, is an effort to distinguish between practical religion and dogmatical religion, to show that religion in theory is good for nothing without religion in practice, and that only as religion makes us better men, and women, and children, in this world, will it prepare us for the next, it is a much needed step in the right direction. Too many seem to think they can have a religion, conformed to theological dogmas, that will carry them straight to heaven, though it makes them no better on earth. There never was a greater blunder. No religion prepares a man for heaven, or will lift him an iota towards heaven, but in proportion as it makes him better here.

This being very straight *Godwards*, but horribly crooked *manwards*, is so shallow a device that no one would believe a human being could run into it, were it not that we see everywhere men devout Sunday but rascally all the rest of the week. If you do not believe as they do, there is no mercy for you, will be none through the endless ages of the hereafter. But if your shiboleth cords with theirs, or if you say the same creed, you may be guilty of sharp practice on 'change, you may cheat the government if you can, you may amass wealth by means no better than stealing, only as less likely to bring you up standing on the gallows, or to lay you horizontal in a low cell of the State Prison. The effect of the awakening has been to make us loathe Catholicism, Episcopalianism, Presbyterianism, Methodism, formalism, cant, hypocrisy, everything not *amendatory of character*, as seen in every day's life; while at the same time, we have been taught by it to love a pure, heaven and earth-wide Christianity better than ever before.

So much of Christianity as all sects and all sober-minded, thoughtful men agree in, is a blessed thing. All beyond is of no sort of practical importance; has no tendency to make men better; does them no good, but often cheats them with the name without the character. Away with it, and give the world a chance to reform. If the object of this book, as we suppose, is to teach that humility towards God, conjoined with truth, goodness, fidelity, honesty towards men, is the first step towards heaven, and that all other steps, if not accompanied by these, are utterly in vain, then we like the "Lay Sermons," and will read them more carefully, and advise everybody else to read them.

THE NEW CLERK'S ASSISTANT; or, BOOK OF PRACTICAL TERMS, containing nu-

merous Precedents and Terms for ordinary Business Transactions, with references to the various Statutes and Latest Judicial Decisions; Designed for the use of Country and Town Officers of every Trade, Bankers, Merchants, Auctioneers, Mechanics, Farmers and Professional men, and adapted to the New-England, Northern and Western States, and California. By John S. Jenkins, Counsellor-at-Law. New-York: C. M. Saxton, 25 Park Row. Twenty-seventh Thousand. 620 pages. 8vo. Price, $2 50.

This work is as practical with regard to Legal Transactions as the foregoing is to the whole duty of man. Its object is to instruct the business man, as well as the justice, the lawyer, and others who serve the public, how his business papers, deeds, mortgages, contracts, everything affecting his property, should be made out, and to enable him to make them out, if he chooses, himself, thereby saving the expense of paying a professional man, and at the same time securing him against such errors and omissions as might lead to endless litigation and final loss. If put into a business man's library, it will be a good and safe legal adviser, always at hand, and its copious index will point him to the very advice he needs in less time than it would take him to find the nearest lawyer.

If a man knows how to do his own business, he will be more likely to do it rightly than any one he might hire to do it for him, because he cares more about it, has more at stake, and will of course feel a deeper interest in having it done as it should be. And then there is an old adage, as true as it is old, that what we do ourselves *is done*, while what we pay others for doing, is not always done.

Every head of a family, who would provide for his own while he lives, and not leave them to the tender mercy of harpies, in case of his decease, should have this book, or one similar; and we know of no other so well adapted to the object of enabling the business man, while he means to be honest himself, to compel those he deals with to be honest with him and his.

We understand that the publisher, for the price above named, will forward this work, prepaid per mail, to any part of the country.

Pear Culture; *A Manual for the Propagation, Planting, Cultivation and Management of the Pear Tree.* With descriptions and illustrations of the most productive of the fine varieties, and selections of kinds most profitably grown for market. By Thomas W. Field. New-York: A. O. Moore, Agricultural Book Publisher, 140 Fulton street. 1848. 286 pages. Price, 75 cts.

This book embodies the results of much study and long practice in the Pear culture, condensed into a convenient size for general use.

Mr. Field has done well to give the world the results of his study, observation and experience at this time, when the utility and even the practicability of pear culture, in our soil and climate, with paying results, is being doubted.

His very candid, matter-of-fact, and no way one-sided discussion of this question is worth more than the price of the book, and we hope it may be extensively read.

Journal of the United States Agricultural Society for 1857. Edited by Ben. Perley Poore, Secretary of the Society. Washington, D. C.

This is the man that lost the bet in 1856, and never backed down, but wheeled the apples all the way from Newburyport to Boston; and the volume of transactions is what we should expect from one so persevering, and who evidently understands his duty as Secretary and Editor. We believe it a faithful report of the doings of the U. S. Agricultural Society for 1857, and it certainly contains very much which should interest the farmer and all lovers of their country.

In addition to nearly 300 pages of reading matter, it has many and valuable engravings, illustrative of important agricultural truths. We should like to know whether it was really, as its title-page imports, printed in Washington. Prices for printing have hitherto ruled higher than the character of the work; but this is well done mechanically, wherever it may have first seen the light, and will be found a valuable number for the members of the Society, who, we believe, are entitled to receive it.

Specimens of Black and Colored Inks, manufactured by George Mather's Sons, New-York.

This is a thick pamphlet, royal octavo, got up in a magnificent style, not for sale of course, but to illustrate (to the trade we suppose) what can be done in the way of faultless ink as an important aid to fine press-work; and it certainly does show an approach in the art of printing to perfection. It is not well for us, Americans, to brag too much. John Bull, can beat brother Jonathan in bragging, and we may as well give it up. But with regard to the art of printing it would not be easy for the world to beat us, when we do our best. With George Mather's Sons to furnish the ink and John A. Gray to lay it on, there will be no cause for complaint.

Mr. George Mather is one of those few plain, unpretending Englishmen (they are not all such, by a wide margin) who came to our city at the close of the last century, or at the beginning of this, established a useful business, pursued it with energy and strict integrity, fifty years or more, and have now left, or are about to leave it, to their sons. To very few men, does the rapid progress, made among us in the most useful art of printing, owe more than to Mr. Mather, and now that he has retired from active life, may his mantle rest on his sons.

The Thirty Fourth Report of the American Sunday-School Union. Philadelphia, 1122 Chestnut street. We can only say that this is a clear and graphic Exposé of what that most excellent society has done the year past, in all parts of our widely extended country, and especially, in the newer portions where other means of instruction than the Sunday-school are hardly yet enjoyed. God speed their work. If one work more than another deserves to be called a "labor of love," piety, goodness, patriotism, it is this. Many of the great and good men yet to rise among us, will the country owe to the Sunday-School Union.

Wm. M. Force, Esq., Secretary of the New-Jersey State Agricultural Society, has our thanks for a copy of the Transactions of that society for 1857.

When so many Reapers and Mowers are offered to the public, it is hard to say which is the best, but without fear or favor we are willing to throw what light we can on this subject.

Pells Manny is a veteran in the invention and manufacture of these machines. We have known him long as an upright man, of superior mechanical genius, and earnestly devoted to the farming interest. That there are men enough, who would like to get a costly machine upon the farmer, without caring much whether it would really facilitate and lighten his labors, we have no doubt. But Mr. Manny is not one of those. The Manny & Co. firm for the manufacture and sale of labor-saving machines for the farm, at Freeport, Ill., would have our entire confidence so far as giving the article they promise is concerned. Of the merits of their machines as compared with all others, we have not knowledge enough, from an actual inspection of their working, to speak positively, but are most favorably impressed, especially with *P. Manny's Patent, Adjustifiable Self-raking Reaper and Mower combined*, a model of which is before us. Our only fear would be, that the self-raking prin-

ciple might render it too complex. That however adds no great amount to its expense, and can be removed at pleasure, if not found to work well in any case, as when the crop is badly tangled or the ground rough.

Of R. L. Allen's mower, we have heard scores of favorable testimonies from farmers, who could have no possible motive for misrepresenting; and never yet, an unfavorable testimony. Besides, we have seen it work on the best and on the worst grounds, in light and heavy grass, in grass standing up and lying flat, and it has worked well in all cases. Without comparing it therefore with all others, we can say and that from positive knowledge, that it is *a good machine*, light of draft, simple in construction, and not likely to clog.

To Advertisers.—Persons having fine Stock, Agricultural Implements, Labor-saving Machinery, Fruit and Ornamental Trees, Seeds, Books for the farmer, &c., &c., to dispose of, would find it for their interest to advertise in the *Farmers' Magazine*.

Our terms are reasonable in all cases, and for advertising such things as are of interest and use to the farmer especially, we are willing to make a liberal deduction, because these advertisements communicate intelligence wanted by our readers, and give increased value to our work.

Our usual terms are ten cents a line for each insertion; but we will not for that price, or any other, advertise useless articles, knowing or having reason to believe them such, nor will we knowingly give the least encouragement or aid to those who are seeking an exhorbitant price by much advertising, even for a useful article.

For a square, of not over 14 lines, the character of the advertisement being unexceptionable, we want $1 an insertion in advance, if ordered less than six times; $5 for six insertions; $9 for twelve insertions; and for $10 advanced we will insert a square one year and send the work to the advertiser for that time.

If money is advanced with order to publish as long as it will pay for, and it does not come out even, we always give an extra insertion for the fraction, in case of short advertisements, and such we always prefer, believing them better for us, as giving more variety, and better for the advertiser, as promising a better return, in proportion to their cost.

Advertisers from abroad who forward money with their orders shall be satisfied.

To Our Exchanges.—An unexpectedly large accession to our subscription list, between the ordering of the June number and the delivery of it by the printer, compelled us to omit more than a hundred exchanges in its distribution. We can only say to the farmers, come on, the more the better, and we will be ready to serve you without again slighting the printers, who we hope will pardon us for once; but please do not order numbers back of July.

NEW YORK CATTLE MARKET.

The receipts of nearly all species of animals for slaughter have been unusually large the week ending June 23;—Beef cattle as compared with last week 4,503 to 3,015; veals, 1,099 to 1,021; sheep and lambs, 9,003 to 7,037; swine, 6,156 to 6,561. Nearly twice as many milch cows have been received this week as last. Total of all animals, this week, 20,981; last week, 17,816; difference, 3,165. Of the 4,503 beeves this week, 2,037 came from Illinois.

The increased numbers in connection with the fact that many of our citizens are leaving for the country, as might have been expected, has brought the price of beef down from 1½ to 2c. a pound, as compared with last week. making a difference of probably from $40,000 to $50,000 against the drovers.

In the cow market there has been an improvement in prices over last week. Long-tailed milk is in request.

Veal calves have also sold more readily this week. Prices; 6 to 6½c. live weight.

In the sheep market, prices have fallen from 50 to 75c. a head.

Swine have fallen most of all.

PROSPECTUS, BUSINESS DIRECTORY, ETC.

THE AMERICAN FARMERS' MAGAZINE is the result of an earnest desire, on the part of its Editor, to furnish a journal of AGRICULTURE, AND OTHER BRANCHES OF RURAL ECONOMY, of an elevated character, national in its spirit, entertaining, *instructive*, and reliable, at a price somewhat lower than the wealthy and liberal would demand, so as to bring it fairly within the means of all.

Its success hitherto confirms our belief that it is what the farmers of this country want, and encourages us to renewed efforts to extend its circulation. Price; $2 a year to single subscribers; $1.50 to clubs of from four to nine; $1.25 to clubs of from ten to twenty; and $1 to clubs of twenty and upwards, in advance in all cases.

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